Readme

AunooAI Documentation

Welcome to the AunooAI documentation. AunooAI is an open strategic intelligence platform that automatically collects, analyzes, and organizes security news articles to help researchers and foresight professionals to stay informed without information overload.

Quick Links

- **GitHub Repository**: https://github.com/AuNooAI/AunooAI
- **Docker Hub**: https://hub.docker.com/repository/docker/aunooai/aunoo-community
- **Community Support**: https://github.com/AuNooAI/AunooAI/issues

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Getting Started

New User? Start Here

- **Getting Started in 5 Minutes** - Quick setup guide for first-time users
- **Docker Installation** - Install using Docker Hub image

Installation Options

Method	Difficulty	Use Case
Docker Hub Image	Easy	Most users - pre-built image
Manual Installation	Advanced	Developers, custom deployments

User Guides

Core Features

- **Explore View** - Main workspace overview
    - Article Investigator - Research and filter articles
    - Narrative Explorer - Pattern analysis and themes
    - Six Articles - Executive briefing tool
- **Anticipate (Trend Convergence)** - Strategic foresight dashboards
    - Strategic Recommendations

        - Market Signals & Strategic Risks
        - Consensus Analysis
        - Impact Timeline
        - Future Horizons

- **Gather** - Automated intelligence collection

    - Submit Articles - Manual article submission

- **Operations HQ** - System health and monitoring

- **Settings** - Configuration and setup

    - App Configuration
    - AI-guided Topic Setup
    - Topic Editor

Feature Overview

Intelligence Collection (Gather)

- **Automated**: Keyword-based monitoring across multiple news sources
- **Manual**: Submit articles via URL or paste content
- **Auto-Processing**: AI scores relevance and enriches metadata

→ Learn more about Gather

Intelligence Analysis (Explore)

- **Article Investigator**: Browse, filter, and manage articles
- **Narrative Explorer**: AI-powered pattern recognition
- **Six Articles**: Executive briefing generator

→ Learn more about Explore View

Strategic Foresight (Anticipate)

- **Strategic Recommendations**: Near/mid/long-term actions
- **Market Signals**: Emerging trends and disruptions
- **Consensus Analysis**: Agreement across sources
- **Impact Timeline**: Event sequencing
- **Future Horizons**: Scenario planning

→ Learn more about Anticipate

System Operations

- **Operations HQ**: System health dashboard
- **Settings**: Configuration and API keys
- **Database**: PostgreSQL with pgvector

→ Learn more about Operations HQ

Common Tasks

How do I...

Task	Guide	Section
Install AunooAI	Docker Installation	Quick Start
Add API keys	Settings	App Configuration
Set up monitoring topics	Settings	AI-guided Topic Setup
Collect articles automatically	Gather	Auto-Collection
Submit articles manually	Submit Articles	URL Submission
Analyze collected articles	Article Investigator	Getting Started
Find patterns and themes	Narrative Explorer	How to Use
Brief executives	Six Articles	Getting Started
Forecast future impacts	Anticipate	Future Horizons
Check system health	Operations HQ	System Health Status
Backup my data	Docker Installation	Backup Data

Troubleshooting

Installation Issues

See: Docker Installation - Troubleshooting

Application Issues

- Check Operations HQ for system health
- Review logs: `docker-compose logs -f aunooai`
- Verify API keys in Settings

Feature-Specific Issues

- **Gather not collecting**: Gather - Troubleshooting
- **Analysis failing**: Anticipate - Troubleshooting
- **No articles showing**: Article Investigator - Troubleshooting

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Support

Community Resources

- **GitHub Issues**: https://github.com/AuNooAI/AunooAI/issues
- **Docker Hub**: https://hub.docker.com/repository/docker/aunooai/aunoo-community
- **Documentation**: You're here!

Getting Help

1. Check the relevant guide above
2. Search GitHub Issues for similar problems
3. Open a new issue with:
    - AunooAI version
    - Docker/system info
    - Steps to reproduce
    - Error messages/logs

Contributing

We welcome contributions! Please see our GitHub repository for:

- Contributing guidelines
- Development setup
- Code standards
- Issue templates

Repository: https://github.com/AuNooAI/AunooAI

Architecture

Technology Stack

- **Backend**: Python (Flask/FastAPI)
- **Frontend**: React + Jinja2 templates
- **Database**: PostgreSQL with pgvector extension
- **AI**: OpenAI, Anthropic Claude, Google Gemini
- **Deployment**: Docker + Docker Compose

System Requirements

- **Minimum**: 4GB RAM, 10GB disk, Docker 20.10+
- **Recommended**: 8GB RAM, 50GB disk, Docker 24.0+

Version History

See GitHub releases: https://github.com/AuNooAI/AunooAI/releases

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License

See: https://github.com/AuNooAI/AunooAI/blob/main/LICENSE

Documentation last updated: 2025-11-25

Quick Start

Getting Started in 5 Minutes

What is Aunoo AI?

Aunoo AI is an open strategic intelligence platform that automatically collects, analyzes, and organizes news articles and research reports.

First-Time Setup

The simplest way to install Aunoo for self-hosting is using Docker

1. Download Deployment Files

Windows (PowerShell):

```
mkdir aunooai
cd aunooai
```

```
Invoke-WebRequest -Uri
"https://raw.githubusercontent.com/AuNooAI/AunooAI/refs/heads/main/docke
r-compose.yml" -OutFile "docker-compose.yml"
```

Linux:

```
mkdir aunooai && cd aunooai

curl -O
https://raw.githubusercontent.com/AuNooAI/AunooAI/refs/heads/main/docker
-compose.yml
```

2. Start AunooAI

```
docker-compose up -d
```

Wait 30-60 seconds for containers to start.

3. Access & Configure

Open browser: **http://localhost:10001**

Default Login:

- Username: `admin`
- Password: `admin123`

4. Configure API Keys

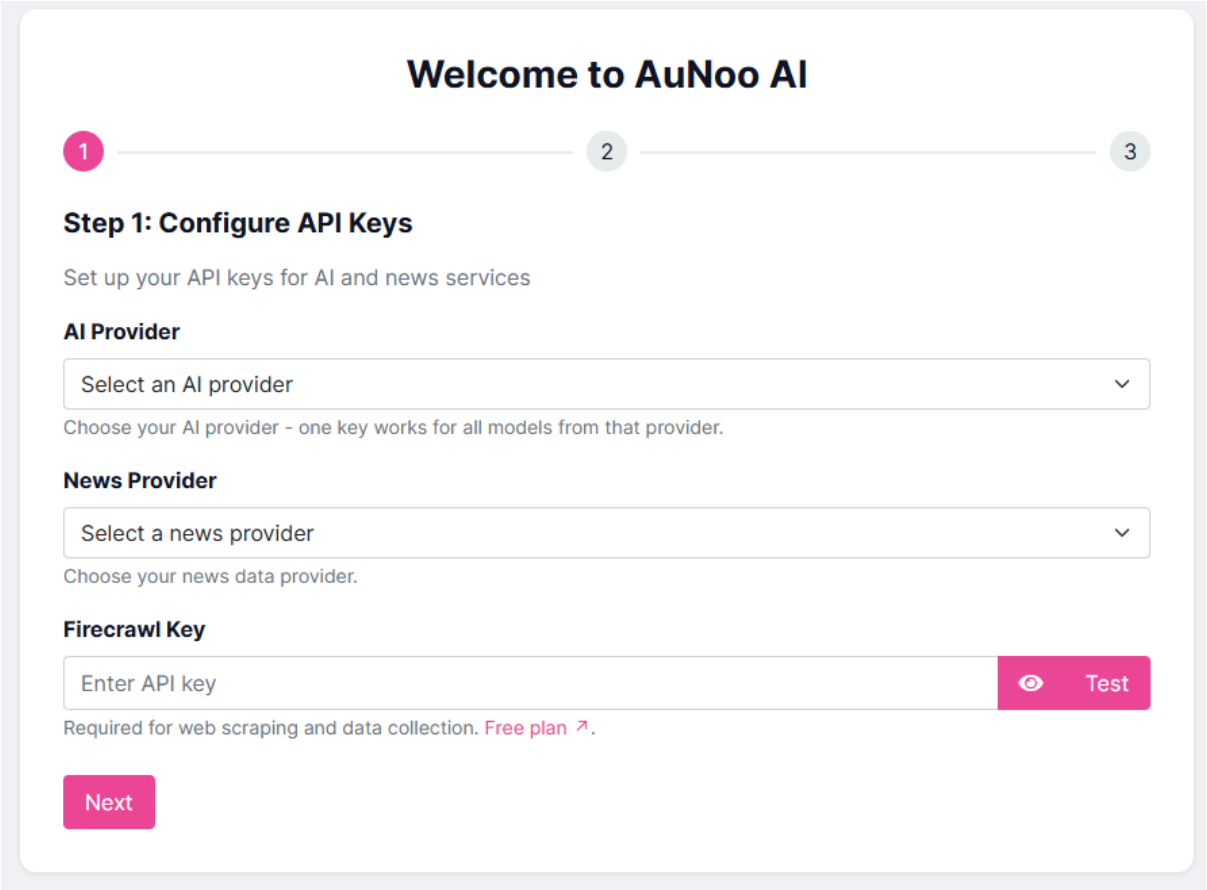
You need API keys for three services:

Don't have keys yet? Get them from:

- **LLM** - OpenAI: https://platform.openai.com/api-keys
- **News Feed** - The NewsAPI: https://www.thenewsapi.com/register
- **Scaper** - Firecrawl: https://firecrawl.dev

How to add keys:

1. **AI-guided Topic Setup**
2. Paste your API keys in Step 1
3. Click **Test** and then **Save** on each



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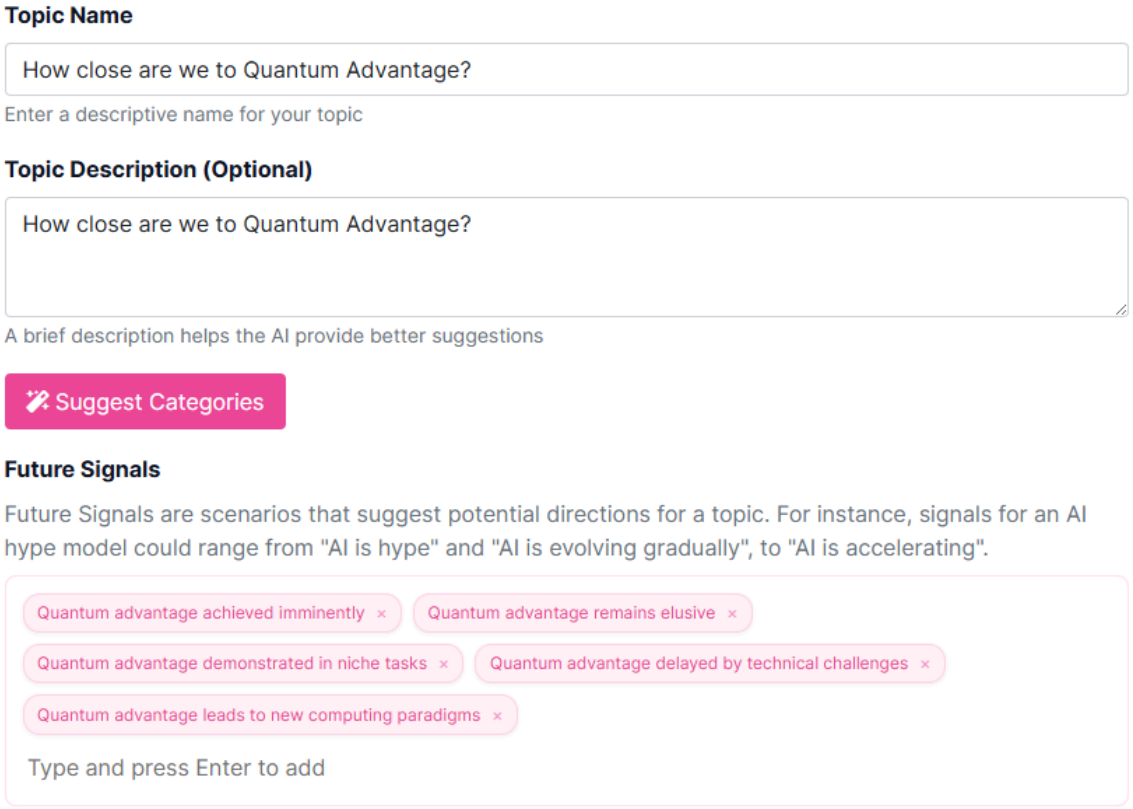
5. Set Up Your First Topic

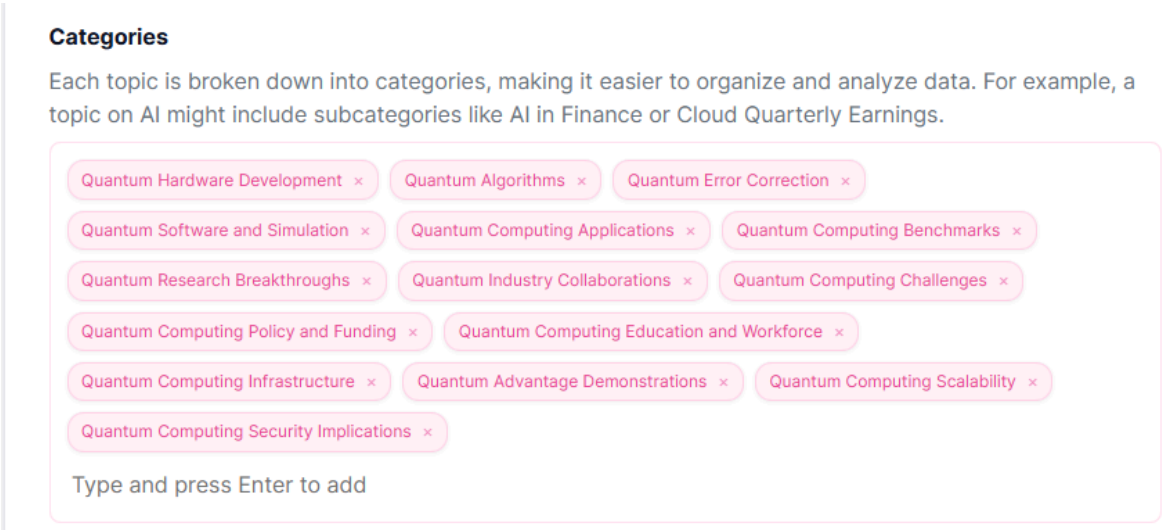
Topics tell Aunoo what to monitor. Examples: "How strong is the cloud repatriation movement?", "What is APT28 up to?", "How close are we to Quantum Advantage"?

Using the wizard:

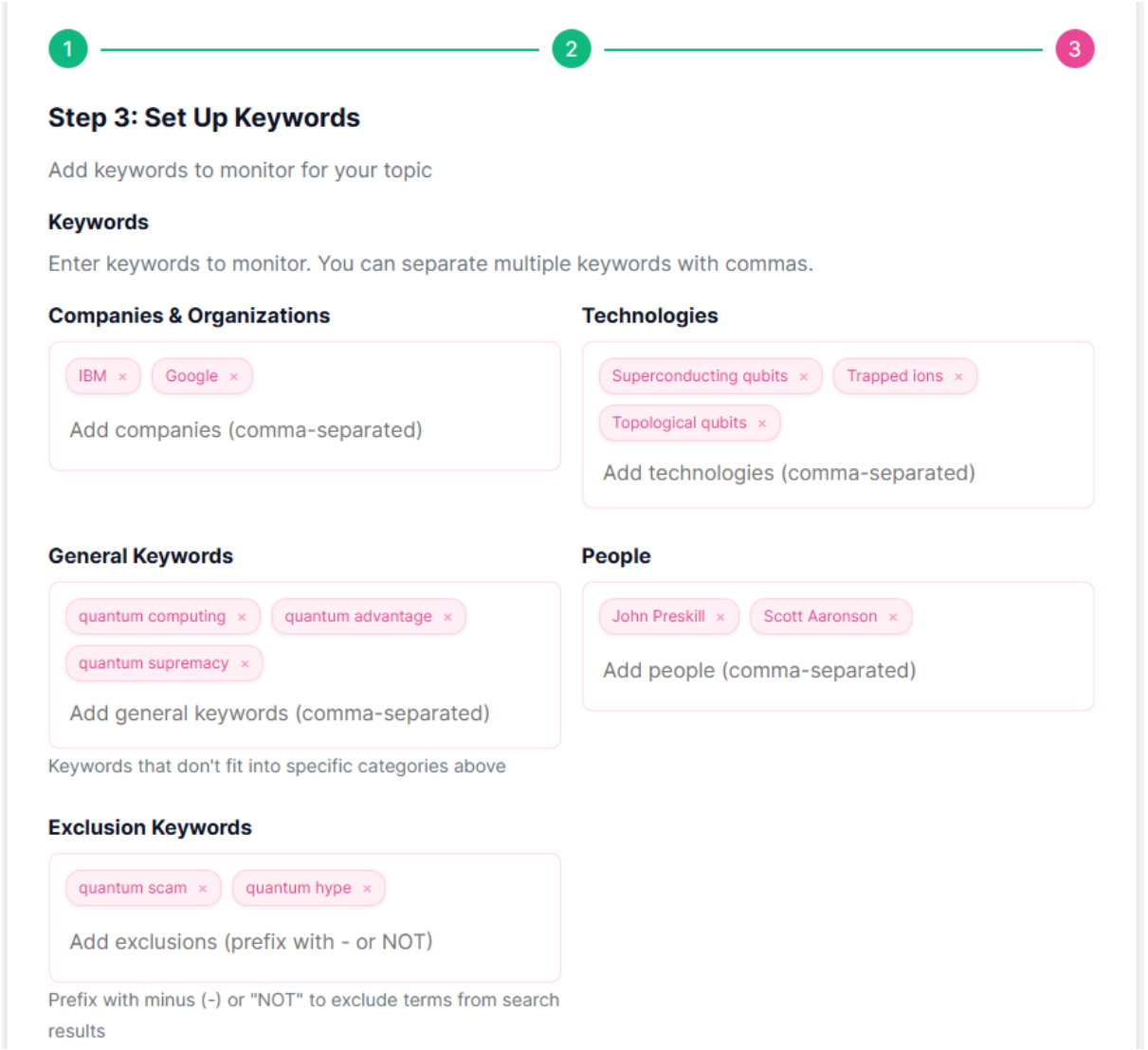
1. Still in **AI-guided Topic Setup**, go to Step 2
2. Enter a topic name: "APT Groups" or "Ransomware Trends"
3. Describe what you want to monitor
4. AI suggests suitable Future Signals, essentially possible scenarios, and suitable categories to break down your topic. When you are happy with the selection, go to Step 3.



5. AI suggests keywords to collect news for your topic automatically



6. Review keywords in Step 3, click **Save**



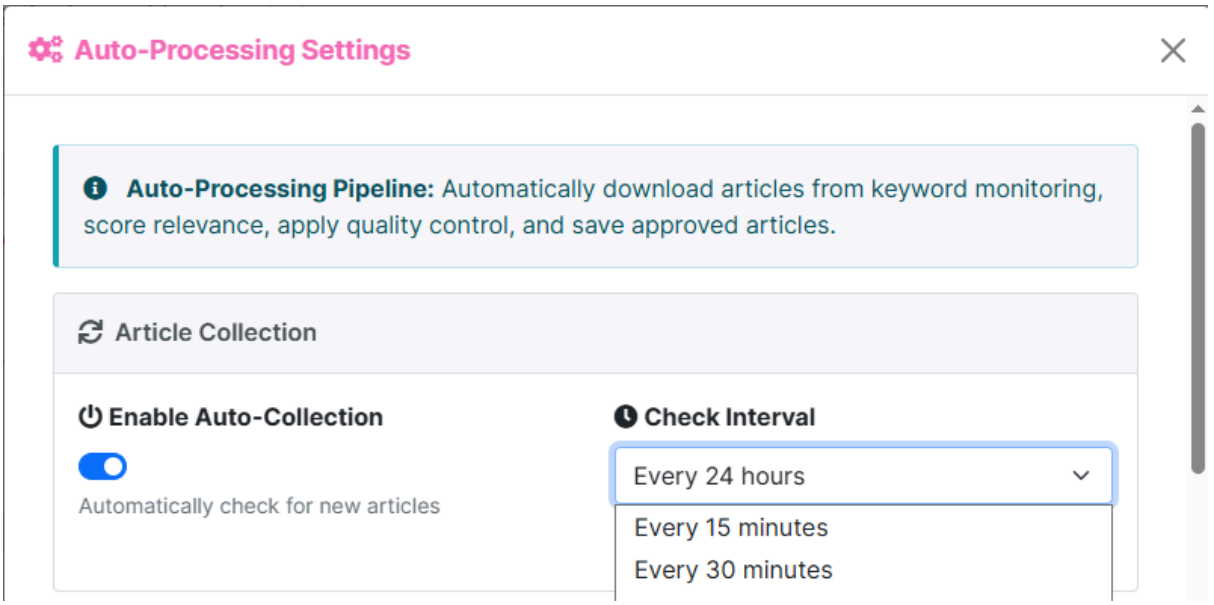
Done! Aunoo will now monitor news for your topic.

Your First Actions

Start Collecting Intelligence

Automated collection (ongoing):

1. Go to **Gather** → **Keyword Alerts**
2. Click **Auto-Collect** button



3. Enable auto-collection
4. Select the LLM you want to use for automated processing
5. Set check interval to 24 hours
6. Click **Save**

Now Aunoo will automatically search for articles every 24 hours.

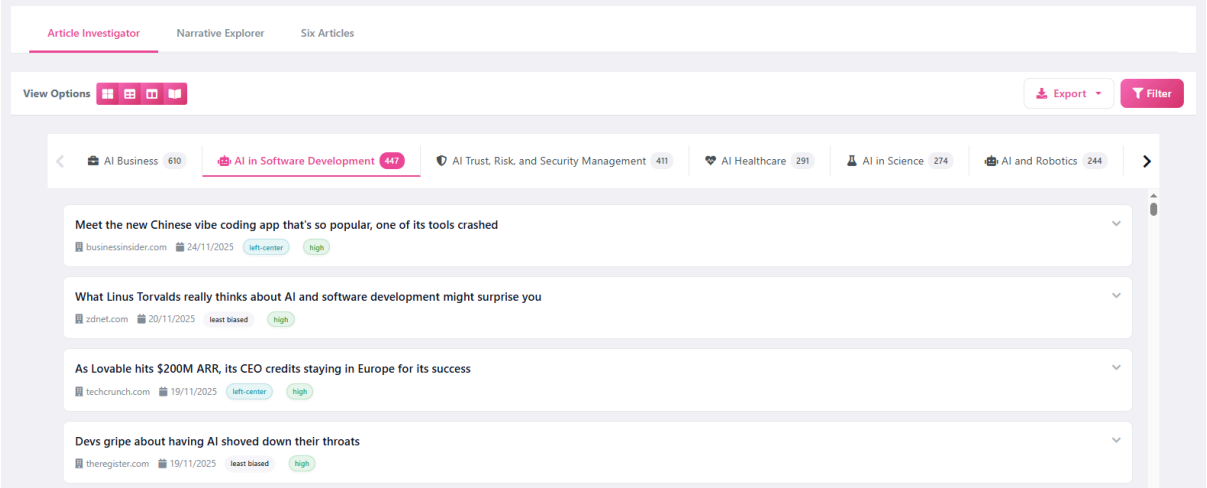
Manual submission (immediate):

1. Go to **Gather** → **Submit Articles**
2. Paste up to 50 article URLs (one per line)
3. Click **Analyze Articles**
4. Click **Save All Articles**

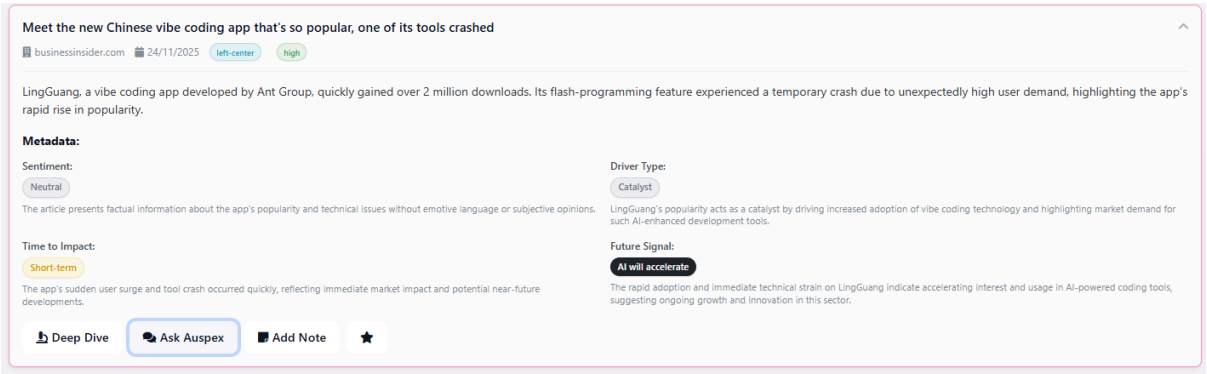
View Your Intelligence

Explore View - Your main workspace:

1. Click **Explore** in the sidebar
2. See all collected articles



3. Use filters to narrow by topic, date, source
4. Drill down into topics by asking Auspex, the AI Futurist.



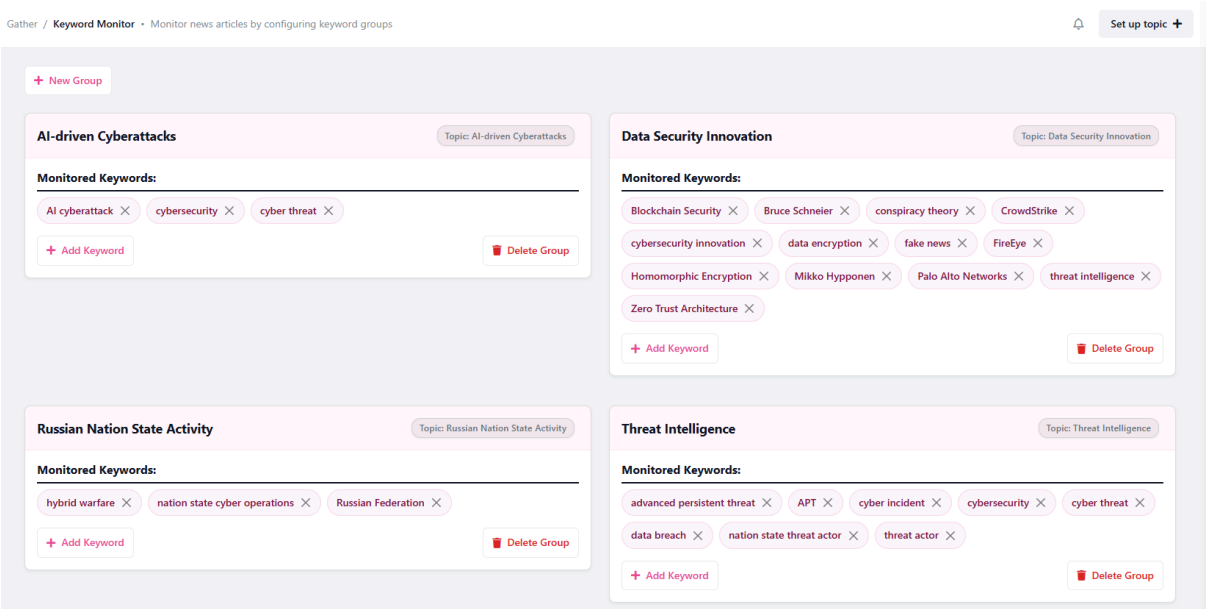
What's Next?

Add More Topics (5 minutes)

1. Go to **Settings** → **AI-guided Topic Setup**
2. Repeat Step 2-3 for each new topic
3. Typical setup: 5-10 topics covering your threat landscape

Configure Keywords (10 minutes)

1. Go to **Gather** → **Manage Keywords**
2. Review auto-generated keyword groups
3. Add specific threat actors, malware names, CVE IDs
4. Enable/disable groups as needed



Common Questions

Q: How do I know if it's working? Go to **Operations HQ**. Check "Articles Today" count. If > 0, it's collecting.

Q: I'm not seeing any articles

- Check **Operations HQ** → **System Health** is HEALTHY
- Verify API keys in **Settings** → **App Configuration** → **Providers**
- Try manual submission first to test the pipeline

Q: Too many irrelevant articles

- Go to **Gather** → **Auto-Collect**
- Increase "Relevance Threshold" to 70-80
- Refine keywords to be more specific

Q: Where do I see collected articles? Explore → **Article Investigator** shows everything. Use filters to narrow down.

Q: How do I brief my team? Explore → **Six Articles** → Click **Write** → Export as PDF/Markdown

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Quick Navigation

I want to...	**Go here...**
Add articles manually	Gather → Submit Articles
See what was collected	Gather → Keyword Alerts
Analyze my intelligence	Explore → Article Investigator
Brief executives	Explore → Six Articles
Find patterns/trends	Explore → Narrative Explorer
Add API keys	Settings → App Configuration
Create new topics	Settings → AI-guided Topic Setup
Check system health	Operations HQ

Last updated: 2025-11-25

Getting Started with Aunoo

Getting Started with Aunoo

Aunoo Community Edition is an Open Strategic Intelligence Platform.

Installing Aunoo Community Edition

Prerequisites, or things to do before we start

There are some things you need to do and should have ready before you begin setting up AuNoo AI.

- Docker Desktop (Windows) or Docker (Linux)
- 4GB RAM minimum, 8GB recommended

AuNoo's Bring Your Own Keys (BYOK) Model

AuNoo Community uses several different 3rd party services and APIs to work. You will need to bring your own keys. This ensures maximum freedom from vendor lock-in, and allows maximum freedom of choice.

At minimum you will need three API keys for:

1. A newsfeed
2. An AI LLM
3. Firecrawl, for article scraping

A News Feed

Aunoo is a news analysis tool, and needs access to news. Aunoo currently supports three different providers.

Provider	URL	Free	Business
NewsAPI	https://newsapi.org/	100 requests / day	$449 / month for 250k requests
The NewsAPI	https://www.thenewsapi.com/	-	$19 / month for 2,500 requests daily, 25 articles per request
NewsData IO	https://newsdata.io/	200 credits / day, 10 articles per credit	$199.99 / month for 20,000 credits and 50 articles max per

			credit.

Newsdata.io is by far the most generous tier for researchers and casual users. We use NewsData.io for our own backend and TheNewsapi for individual tenants.

AI / LLMs

Aunoo has been designed to work with a variety of different commercial and open-weights LLM's.

AI	https://platform.openai.com/ https://claude.ai/ https://ai.google.dev/	AuNoo utilizes LLMs to automate news analysis.

[TIP] What Size LLM do I need?

While most LLMs will do a decent job of determining the topical content or sentiment of an article, we have found that some smaller models struggled to reliably and consistently generate output. For larger analyses, larger models yield deeper insights.

Task	**Best Results Model**	
Enrichment	OpenAI gpt4o-mini	
Auspex	OpenAI GPT4.1, GPT5, GPT5.1	
Anticipate Foresight Storyboards, Explore Narratives and Incidents	OpenAI GPT4.1	

[TIP] Comparing LLM Models

Under "Settings" -> "Model Bias Arena" you can compare different AI models against benchmark articles to see which ones work well.

A Note on Costs
We used OpenAI GPT-o1-mini throughout most analyses, using around $3 for upwards of 250 articles per month. You can also set a limit on costs to avoid any unpleasant surprises.

Website Scraping

Most news aggregation feeds provide links to articles, but not always the content. So we use Firecrawl to fetch article content.

- 1 scrape roughly corresponds to 1 article.
- A newsletter like the Curious AI uses around 100-1000 per month
- For a larger enterprise monitoring 10 topics, around 10000 - 20000 articles per month is a good estimate.

Website	Free Plan	Hobby	Standard
https://firecrawl.dev	Firecrawl offers a free plan with a one-time 500 credits (or scrapes	$19/month for 3000 scrapes per month.	$99 / month for 100,000 scrapes

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Getting AuNoo AI

The simplest way to install Aunoo for self-hosting is using Docker

1. Download Deployment Files

Windows (PowerShell):

```
mkdir aunooai
cd aunooai
```

```
Invoke-WebRequest -Uri
"https://raw.githubusercontent.com/AuNooAI/AunooAI/refs/heads/main/docke
r-compose.yml" -OutFile "docker-compose.yml"
```

Linux:

```
mkdir aunooai && cd aunooai

curl -O
https://raw.githubusercontent.com/AuNooAI/AunooAI/refs/heads/main/docker
```

```
-compose.yml
```

2. Start AunooAI

```
docker-compose up -d
```

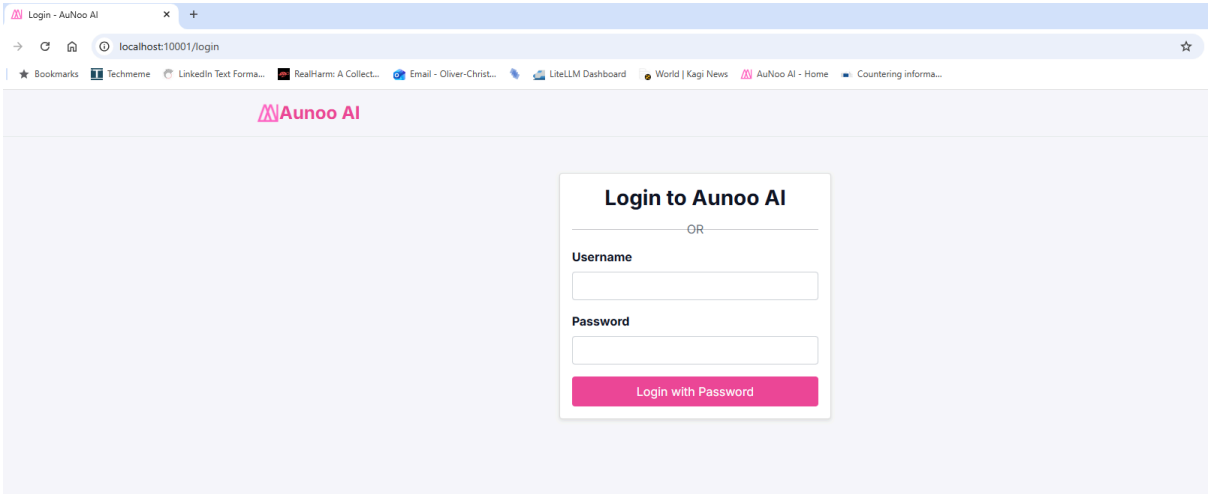
Wait 30-60 seconds for containers to start.

3. Access & Configure

Open browser: **http://localhost:10001**

Default Login:

- Username: `admin`
- Password: `admin123`



⚠️ Change your password after you log on.

You will be asked to create a new password after first logging in.

At least 8 characters long	Must contain at least one number
Must contain at least one uppercase letter	Must contain at least one special character

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The News Firehose: Getting Data Into Aunoo AI and enriching it

After finishing the onboarding agent, select “Update Now” to kick off collecting the first articles. The News Firehose will start gathering and contextualising articles based on the keywords and news feed the onboarding agent set up.

You can now go and grab a beverage. Depending on how many keywords were set up, this may take a while. If you are running AuNoo as a server, you can also set up “Auto-Collect” to periodically fetch and enrich articles automatically.

Setting up Auto-Collect

The Auto-Collect pipeline automates the process of discovering, downloading, analyzing, and saving news articles based on your Topic. You can access these settings by clicking the “Auto-Collect” button on the News Firehose page.

Overview

The Auto-Processing Pipeline automatically:

1. Downloads articles from keyword monitoring
2. Scores relevance using AI
3. Applies quality control filters
4. Saves approved articles to your database

By default, we apply the following settings:

1. Enable Autocollection every 24 hours
2. Search across articles for a maximum of the past 7 days
3. Maximum daily API requests 100
4. Whichever News API key was added during onboarding will be activated
5. Articles will be scored for at least medium relevance.
6. Article output will be quality assessed to ensure we don’t save CAPTCHA, errors or other bad data to the topic dataset.

You will want to configure the most suitable LLM model in the “Default LLM Model” Dropdown

Best Practices

- **Start Conservative:** Begin with a 24-hour check interval and adjust based on your needs
- **Balance API Usage:** Use the Daily Request Limit to control costs while getting adequate coverage
- **Tune Relevance Threshold:** Monitor your statistics and adjust the threshold to find the right balance
- **Enable Quality Control:** Keep QC enabled to maintain high-quality article collections
- **Test First:** Use "Test Auto-Ingest" to verify your settings before relying on automated collection
- **Multiple Providers**: Select multiple news providers for broader coverage

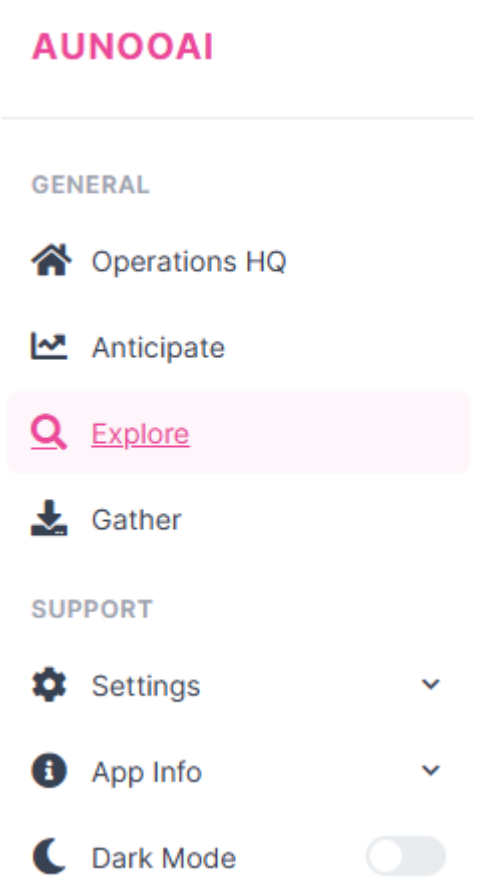
See Auto-Collect Settings for a full list of settings

Monitoring News

There are a few different ways you can explore your topic maps.

1. Auspex: You can chat with Auspex, our semantic interface.

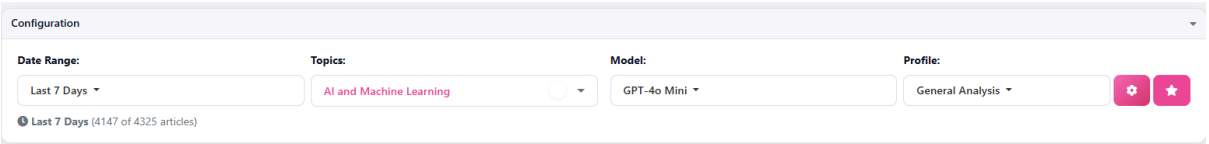
2. Explore” views



Article Investigator

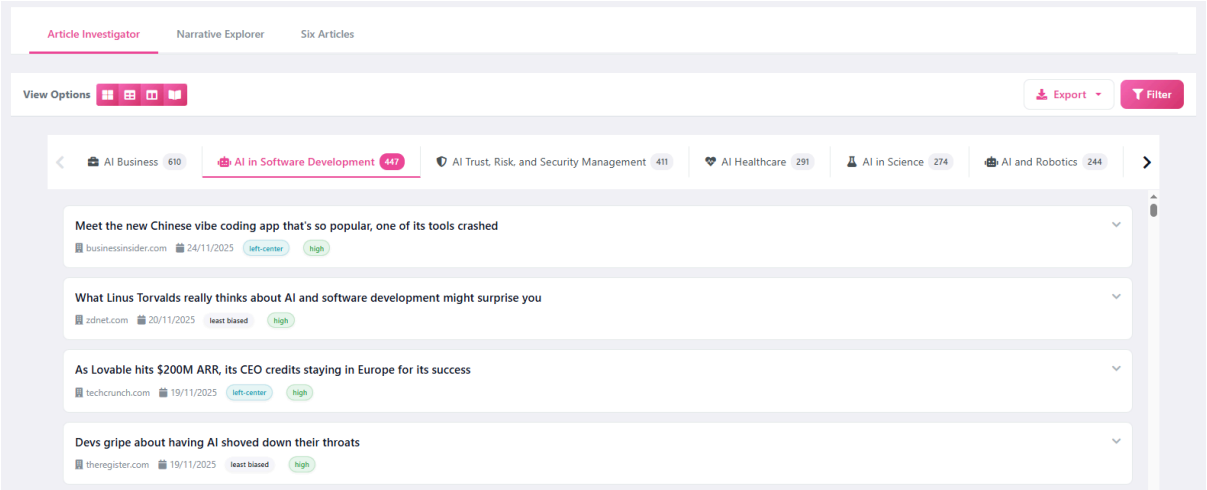
You can read and investigate all collected articles from the Article Investigator.

a. Select the date range, topics, and AI model to use for analysis and narration
b. You can also select an Organizational Profile to tailor analyses to your interests, risk appetite and priorities.

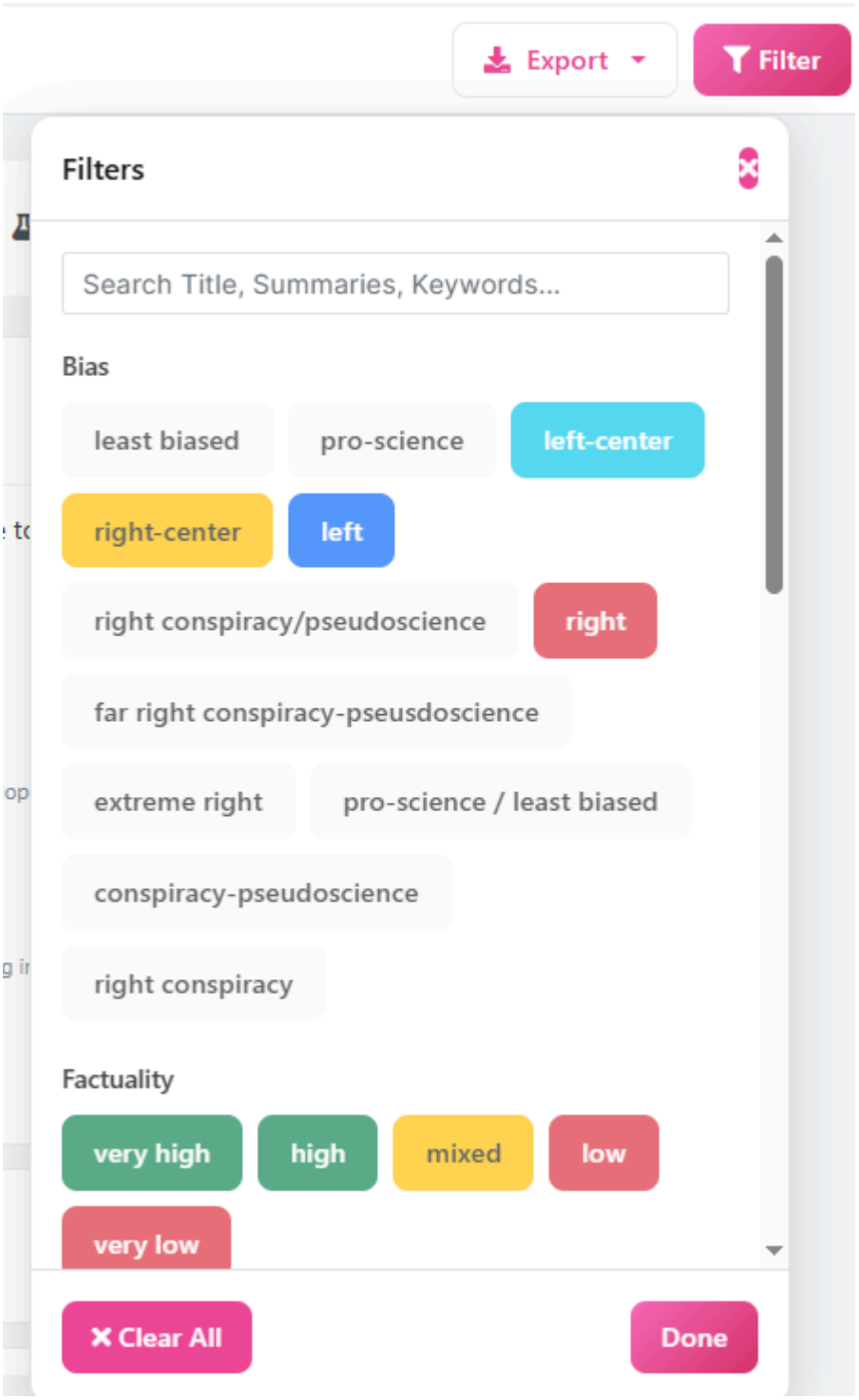


c. View options include:
    i. Card View: Review and drill down into individual articles
    ii. Techmeme view: Inspired by Techmeme
    iii. HUD View: Includes a breakdown by category
    iv. Reader View: Two-column view broken down by category

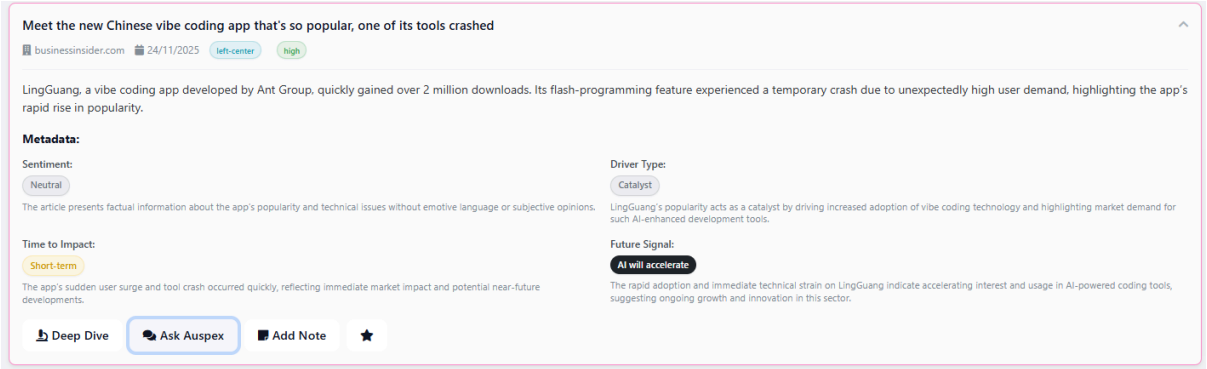
d. When you expand an article, additional context and analyses will be generated and cached.



e. Filtering: You can search for articles by keywords
f. Filter by
    i. Bias
    ii. Factuality
    iii. Category
    iv. Signals
g. Or order the article results by Date, Category, or Bias.



h. All article views provide further follow-up themes or questions for Auspex



Narrative Explorer

Useful Information

Topic Features

A typical topic has the following features:

Feature	Description	Examples
Topic Name	Description of the topic, could be a question, a market, a field or even a group of people.	• How big is the cloud repatriation trend? • How much of AI is hype • What are our competitors doing?

Categories	A topic is composed of categories. Categorizing your data points will allow us to mine and analyze them better and will help us understand our topics intimately. For example, nuclear power seems critical to powering an AI revolution. Cloud providers earnings results seem relevant to cloud repatriation, and your competitors would also be something you want to track in detail.	• AI in Finance • Cloud Quarterly Earnings • Ford Motor Company
Future Signals	Future signals are indicators for the direction a topic can take. For example, future signals for an AI hype model could be "AI is hype" or "AI is evolving gradually.". In the case of tracking a market, it could be "Market Convergence" or "Market Growth Stalling.". But we can also get more granular, for example "New Hire", or "New Feature."	• AI will evolve gradually • Hypergrowth • New Customer Acquisition

Sentiments	We mean the sentiment towards the topic, for example, optimistic towards AI progress. The simplest form is: Positive, Neutral, Negative. AuNoo AI can go even deeper and ask if the tone of an article is mocking, critical, or hyperbolic.	• Positive, Neutral, Negative • Critical, Skeptical • Hyperbolic, Optimistic, Pessimistic
Time to Impact	In what time frame is the impact is expected in, for example, immediate, short term (3-18 months), mid term (18-60 months), long term (5 years+)?	• Immediate • Short term • Mid term • Long term
Driver Types	What effect does the data point have on the topic? For example, a lack of progress in the nuclear power supply chain build-out would be an inhibitor for a fast AI revolution. Or a new discovery in developing faster, cheaper GPU memory will act as an accelerator or even catalyst for other AI fields.	• Accelerator • Delayer • Blocker • Initiator • Catalyst

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Auto-Collect Settings

Article Collection Settings

Enable Auto-Collection
Enables or disables automatic article collection. When enabled, the system will automatically check for new articles based on your keyword monitoring rules.

Check Interval
Controls how frequently the system checks for new articles matching your keywords:
- Every 15 minutes - For time-critical monitoring
- Every 30 minutes - Frequent updates
- Every hour - Regular monitoring
- Every 2 hours
- Every 4 hours
- Every 6 hours
- Every 8 hours
- Every 12 hours
- Every 24 hours (Default) - Daily digest

Search Configuration Settings

Search Date Range
Defines how far back in time to search when checking for articles. For example, setting this to 7 means the system will look for articles published in the last 7 days.

Daily Request Limit
Maximum number of API requests the system can make per day. This helps control costs and prevents API rate limiting.

News Providers

Select which news provider APIs to search across. You can select multiple providers to cast a wider net for article discovery. Available providers are loaded dynamically based on your configuration.

Supported News Providers

AuNoo’s “Collectors” get data into the solution. AuNoo currently supports the following Collectors:

News Feeds	Research Feeds	Social Media
newsdata.io TheNewsAPi NewsAPI	Semantic Scholar Arxiv	Bluesky

If you've completed the onboarding wizard, you will already have a preconfigured topic and keyword group.

News Collection Settings

Search Fields
Controls which fields the keyword search applies to:

- Title - Search article headlines
- Description - Search article summaries
- Content - Search full article text

Language
Limit article collection to a specific language:
- English, Arabic, German, Spanish, French, Hebrew, Italian, Dutch, Norwegian, Portuguese, Russian, Swedish, Chinese

Sort By
Controls how search results are prioritized:

- Newest First - Most recent articles appear first
- Most Relevant - Best keyword matches appear first
- Most Popular - Most-shared/viewed articles appear first

Results Per Search
Maximum number of articles to retrieve per keyword search. Higher values collect more articles but consume more API requests.

Article Processing Settings

Enable Auto-Processing
When enabled, collected articles are automatically analyzed and enriched with AI-powered insights. If disabled, articles are collected but not processed.

Quality Control
Enables AI-powered quality review and filtering. Articles are evaluated for relevance, credibility, and quality before being saved.

Quality Filters

Minimum Relevance Score
Sets the threshold for auto-processing articles. Articles scoring below this relevance level will not be automatically processed.

- Lower values (0-30%) - Accept broader range of articles

- Medium values (30-60%) - Balanced filtering
- Higher values (60-100%) - Only high-relevance articles

LLM Configuration

Default LLM Model
Selects which AI model to use for relevance scoring and quality control. Available models are loaded from your system configuration.

Temperature
Controls AI response consistency:
- Lower values (0-0.5) - More consistent, deterministic results
- Medium values (0.6-1.0) - Balanced creativity and consistency
- Higher values (1.1-2.0) - More varied, creative responses

Max Tokens
Controls the maximum length of AI-generated analysis. Higher values allow more detailed analysis but consume more resources.

Processing Options

Save Approved Only
When enabled, only articles that pass quality control are saved to the database. Articles that fail QC are discarded.

Max Articles Per Run
Limits how many articles are processed in each auto-collection batch. This prevents overwhelming your system with too many articles at once.

Auto-Regenerate Reports
When enabled, automatically updates the Six Articles report and Dashboard after each auto-collection run completes. This keeps your analytics current without manual intervention.

Auto-Ingest Statistics
The settings modal displays real-time statistics:
- Total Processed - Total articles analyzed by the auto-collection system
- Approved - Articles that passed quality control
- Below Threshold - Articles filtered out due to low relevance scores
- Failed QC - Articles that failed quality control checks

Onboarding Agent

Onboarding Wizard

A 3-step wizard that helps you configure new topic monitoring:

Step 1: API Keys (auto-skipped if already configured)

- Configure AI provider keys (OpenAI, Anthropic, Gemini)
- Configure news provider keys (NewsAPI, TheNewsAPI, etc.)
- Configure Firecrawl for web scraping

Step 2: Topic Setup

- Enter a topic name (e.g., "APT28 Campaigns")
- Provide a description of what you want to monitor
- AI suggests relevant keywords based on your topic

Step 3: Keywords

- Review AI-suggested keywords
- Add/remove/edit keywords as needed
- Keywords are used by Gather for automated collection

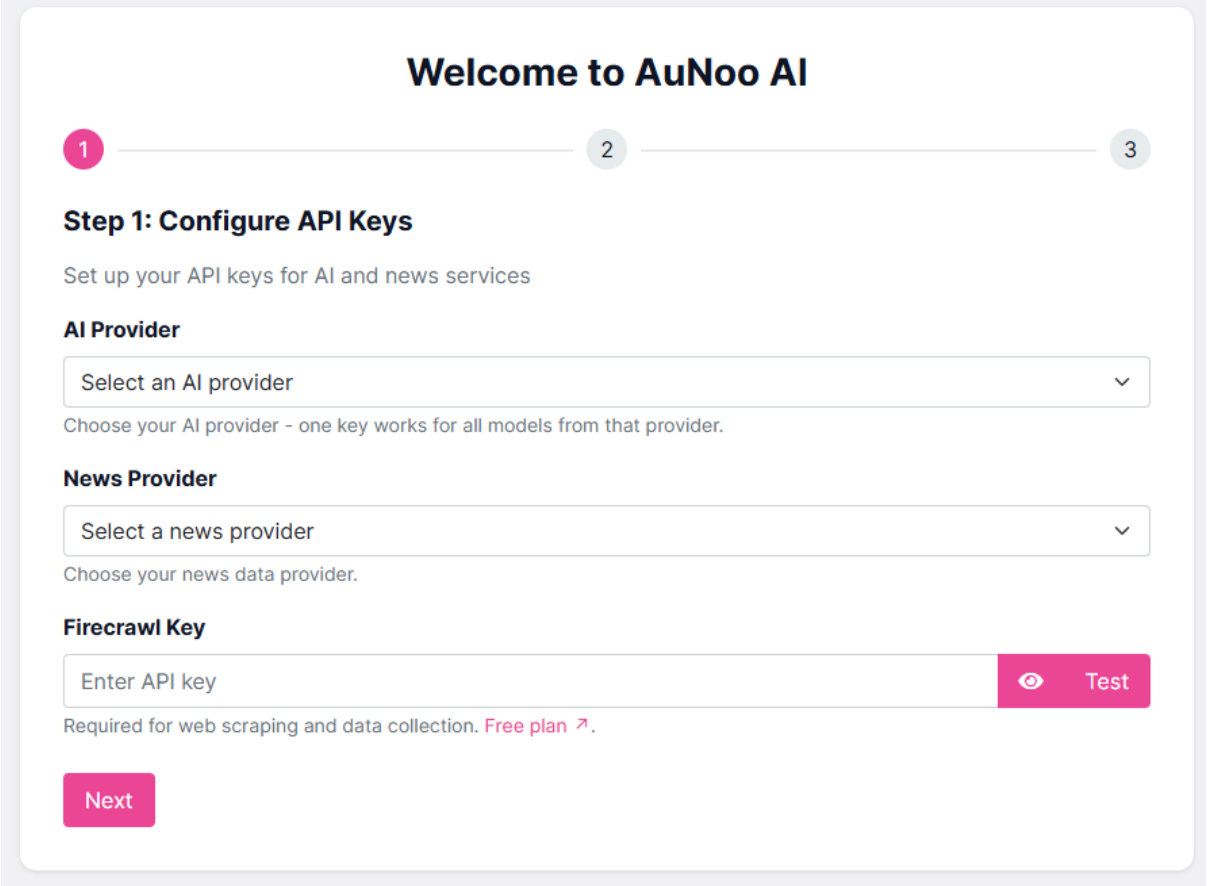
When to Use:

- Setting up your first topics
- Adding new threat categories to monitor
- Getting AI help with keyword brainstorming

Detailed Instructions

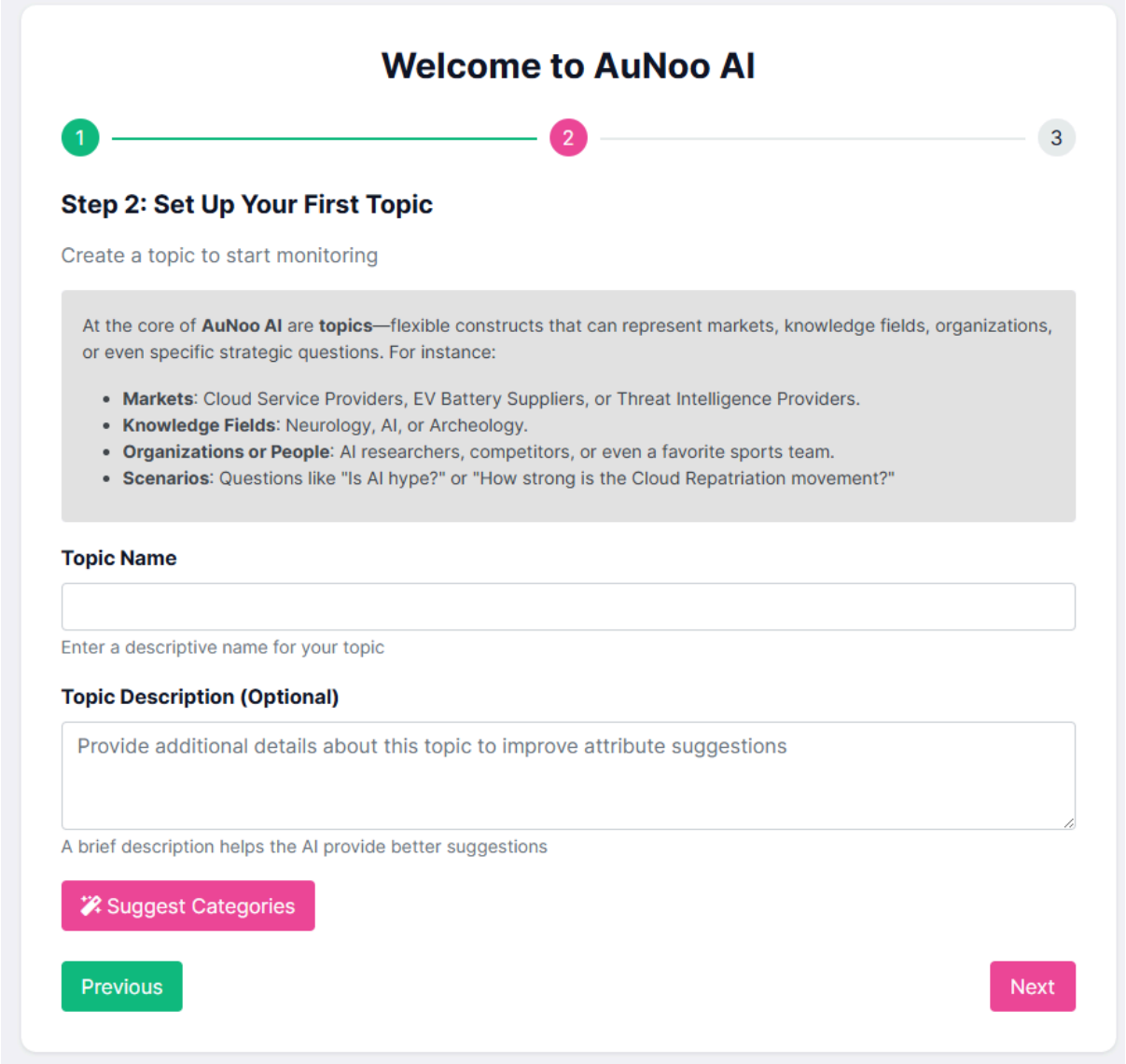
Set up API Keys

1. When you first start AuNoo, you will be presented with the onboarding agent.



2. Make sure you have the API Keys ready we told you about earlier.
3. The agent will run a basic test for each API before allowing you to continue

Set up your first topic



1. Enter the topic or question you're interested in.

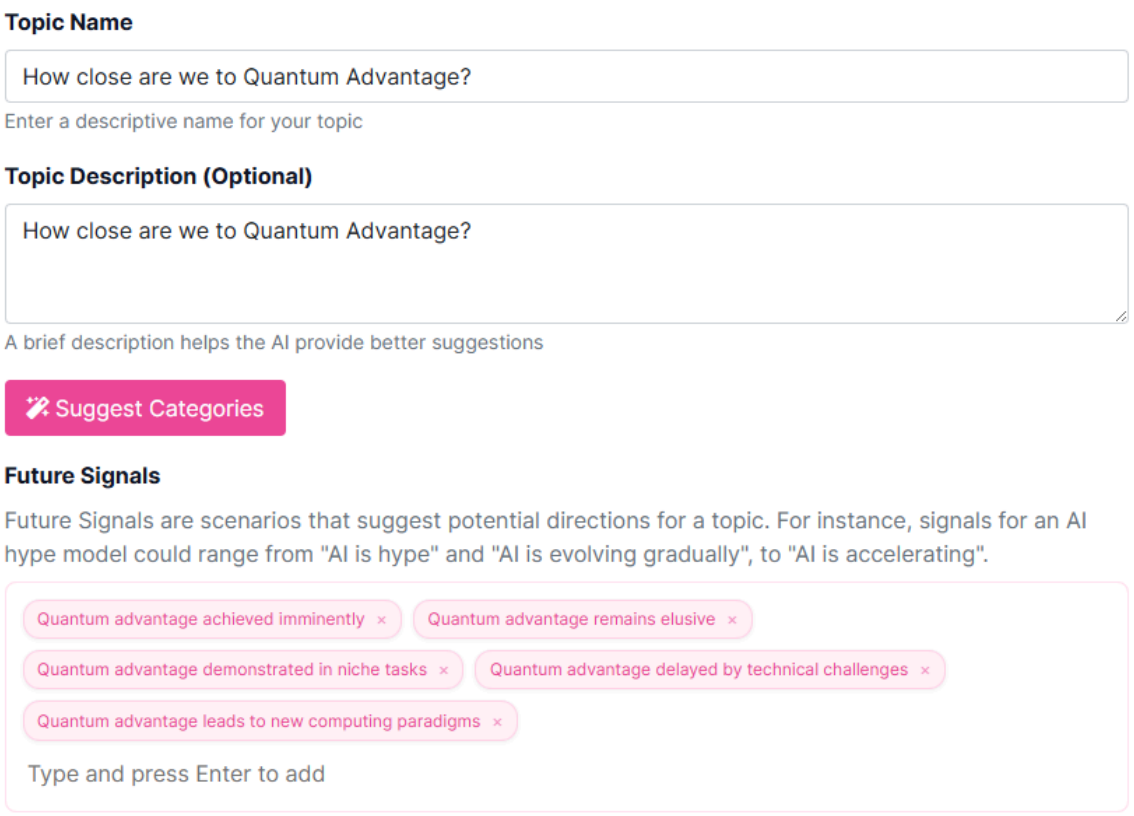
At the core of AuNoo AI are **topics**: flexible constructs that can represent markets, knowledge fields, organizations, or even specific strategic questions. For instance:

- **Markets:** Cloud Service Providers, EV Battery Suppliers, or Threat Intelligence Providers.
- **Knowledge Fields:** Neurology, AI, or Archeology.
- **Organizations or People:** AI researchers, competitors, or even a favorite sports team.
- **Scenarios:** Questions like "Is AI hype?" or "How strong is the Cloud Repatriation movement?"

2. When you are happy with the topic name and description, hit “Suggest Categories”. Aunoo’s onboarding agent will make some suggestions for the necessary topic ontology. You will see suggestions for Future Signals and Categories.

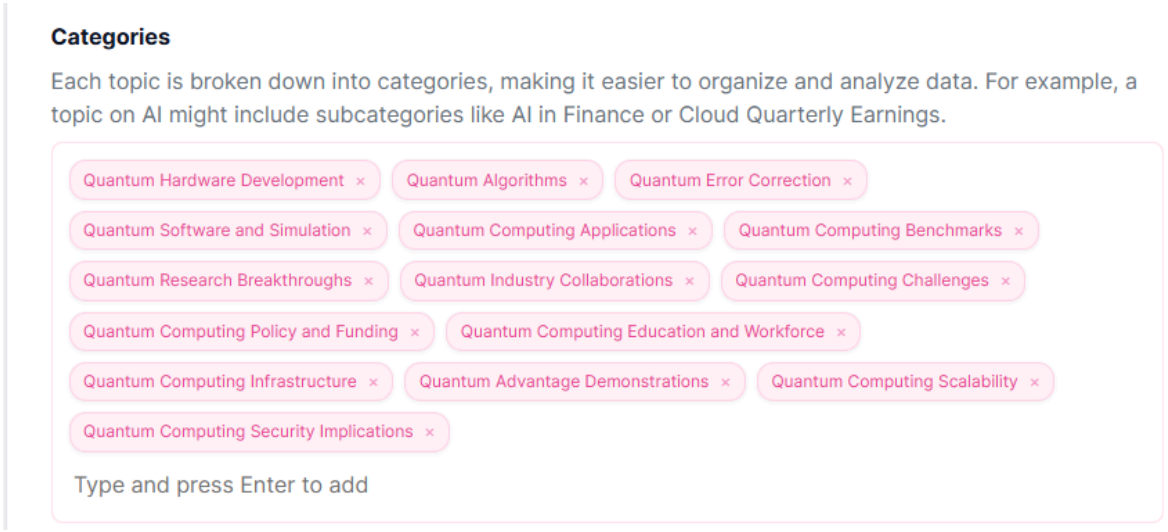
Future Signals

Future signals are scenarios for the direction a topic can take. For example, future signals for an AI hype model could be "AI is hype" or "AI is evolving gradually". In the case of tracking a market, it could be "Market Convergence" or "Market Growth Stalling".



Categories

Each topic is broken down into categories, making it easier to organize and analyze data. For example, a topic on AI might include subcategories like AI in Finance or Cloud Quarterly Earnings. The topic agent can do most of the heavy lifting for you. All it needs is the topic name and a description.

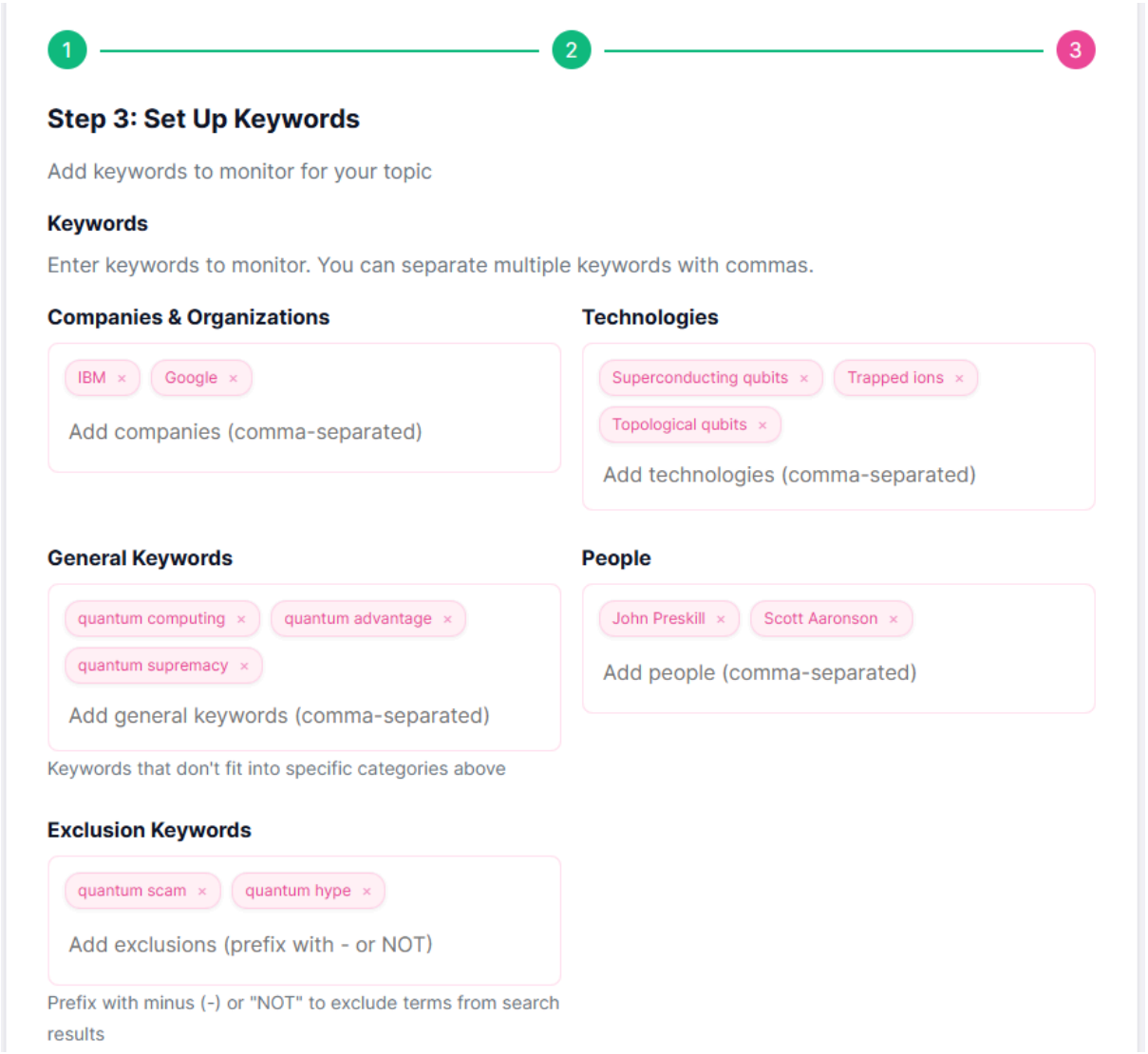


You can amend the topic name or description and use the “Get Different Suggestions” option to regenerate the selection.

See the section on Topic Features for an in-depth overview of these and other available topic features.

3. When you are happy with the suggestions, press “Finish” to move to last step
4. You will be presented with the “Set Up Keyword” page.

While AuNoo is a semantic solution, most news feeds still use keywords. The suggestions will allow AuNoo to search across different feeds and also help improve relevance scoring, as keywords are used to provide context to the AI.



NOTE: Each keyword will be used to issue a search request, meaning that this will be counted as an API request by many newsfeeds. See Best Practices for Keyword Monitoring for optimization tips and tricks.

5. When you are satisfied with the keyword to be monitored, select the “Finish” button.

Collecting Data - Getting started with Gatherather

Getting Started with the News Firehose under “Gather”

The News Firehose is your automated intelligence collection system. This powerful tool monitors keywords across multiple news providers, automatically collects matching articles, and surfaces emerging trends before they become mainstream threats.

Think of Gather as your 24/7 intelligence collector, constantly scanning the threat landscape for signals that matter to your organization.

How does the News Firehose work?

The News Firehose automates the intelligence collection process:

- **Keyword Monitoring**: Track specific threats, actors, technologies, or topics
- **Multi-Source Collection**: Search across multiple news providers simultaneously
- **Auto-Processing Pipeline**: Automatically download, score, and approve relevant articles
- **Emerging Trends**: Visualize growth patterns and detect breakout stories
- **Smart Alerts**: Group related articles by topic and keyword clusters

---

Key Concepts

Keyword Groups

Keywords are organized into **groups** by topic (e.g., "APT28", "Ransomware Trends", "Log4j"). Each group can contain multiple related keywords and tracks its own collection statistics.

Auto-Processing Pipeline

When enabled,the News Firehose automatically:

1. **Searches** news providers based on your keywords
2. **Downloads** matching articles
3. **Scores** relevance using AI
4. **Filters** low-quality or irrelevant content
5. **Saves** approved articles to your intelligence database

Emerging Trends Overview

A visual dashboard showing:

- **Growth Status**: Accelerating, stable, or declining trends
- **Sparkline Charts**: Article volume over time
- **Alert Counts**: Number of unread articles per group
- **Tags**: Keywords that triggered the match

Getting Started

Step 1: Set Up Your Keywords

<u>You can skip this step if you've used the Onboarding Agent</u>

1. Click **Manage Keywords** in the toolbar
2. This takes you to the Keyword Monitor page where you can:
    - Create new keyword groups by topic
    - Add keywords to existing groups
    - Configure search operators (AND, OR, NOT)
    - Enable/disable specific keyword groups

Tip: Start with 3-5 high-priority threat topics and expand from there.

Step 2: Configure Auto-Collection

1. Click **Auto-Collect** in the toolbar
2. Configure your collection settings:

    - **Enable Auto-Collection**: Turn on automated searching
    - **Check Interval**: How often to search (every 15 min to 24 hours)
    - **Search Date Range**: How far back to look (1-30 days)
    - **News Providers**: Select which sources to monitor
    - **Search Fields**: Where to look (title, description, content)

3. Set up the Auto-Processing Pipeline:

    - **Relevance Threshold**: Minimum score to auto-approve (0-100)
    - **Auto-Tagging**: Automatically assign topics to articles
    - **Enrichment**: Add entity extraction and geolocation
    - **Quality Control**: Filter duplicates and low-credibility sources
    -

By default, we apply the following settings:

- Enable Autocollection every 24 hours

- Search across articles for a maximum of the past 7 days
- Maximum daily API requests 100
- Whichever News API key was added during onboarding will be activated
- Articles will be scored for at least medium relevance.
- Article output will be quality assessed to ensure we don’t save CAPTCHA, errors or other bad data to the topic dataset.

You will want to configure your LLM model of choice in the “Default LLM Model” Dropdown

4. Click **Save Settings**

Step 3: Enable Auto-Processing

1. Toggle the **Auto-Processing** switch in the top-right corner to **ON**
2. Gather will now run automatically based on your check interval
3. Monitor the status ticker to see:
    - Last search time
    - Processing job count (if active)
    - Any errors or issues

Step 4: Manual Updates (Optional)

- Click **Update Now** to immediately search all active keyword groups
- Use this for breaking news or when you can't wait for the next scheduled run
- Monitor the progress in the status badge

Understanding the Dashboard

Emerging Trends Table

Each row represents a keyword group with the following columns:

Status Badge

- **Accelerating**: Article volume increasing rapidly
- **Stable**: Steady flow of articles
- **Declining**: Fewer articles than before
- **No Data**: No recent articles found

Emerging Trend

- **Group Name**: Your keyword group (e.g., "APT28 Campaigns")
- **Topic**: The assigned topic category

Growth Chart (Sparkline)

- Visual representation of article volume over the last 7-14 days
- Helps identify sudden spikes or sustained growth

- Hover to see approximate counts

Size (Alert Count)

- **X alerts**: Number of unread articles in this group
- Click to expand and view the articles

Tags & Enrichment

- **Keyword Tags**: Which keywords triggered the match
- Shows first 3-5 keywords, expandable to see all

Detected

- When the trend was first detected
- Helps prioritize breaking vs. ongoing stories

Article Cards

Each article shows:

- **Title & Source**: Article headline and publisher
- **Published Date**: When the article was published
- **Summary**: AI-generated or source-provided summary
- **Matched Keywords**: Which keywords triggered this alert
- **Actions**:
    - **Mark as Read**: Remove from unread count
    - **Analyze**: Run deep analysis or add to investigation
    - **Archived View:** View on Archive.is
    - **Bypass Paywall:** View on 12ft.io

Key Features

Submit Articles

Manually add articles that weren't caught by keyword monitoring:

- Click **Submit Articles**
- Enter article URL or paste text
- Assign topic and tags
- Article is processed like auto-collected content

Update Now

Immediately trigger a search across all active keyword groups:

- Click **Update Now**
- Bypass the scheduled check interval
- Useful for breaking news or time-sensitive threats
- Monitor progress via status badge

Auto-Collect Settings

Fine-tune your automated collection:

Article Collection

- **Enable/Disable**: Turn auto-collection on/off
- **Check Interval**: 15 minutes to 24 hours
- **Search Date Range**: 1-30 days lookback
- **Daily Request Limit**: API rate limiting (default 100)

Search Configuration

- **News Providers**: Select multiple sources (NewsAPI, GoogleNews, etc.)
- **Search Fields**: Title, description, and/or content
- **Language**: Filter by language (English, Russian, Chinese, etc.)
- **Sort By**: Newest first or most relevant

Auto-Processing Options

- **Relevance Threshold**: Minimum score (0-100) to auto-approve
- **Auto-Tagging**: Automatically assign topics based on content
- **Entity Extraction**: Identify organizations, people, locations
- **Duplicate Detection**: Filter out redundant articles
- **Quality Control**: Block low-credibility sources

Manage Keywords

Jump to the Keyword Monitor page to:

- Create new keyword groups
- Edit existing keywords
- Enable/disable groups
- Test keyword queries before saving

Cancel Task

Stop a running background collection job:

- Appears when a task is in progress
- Click **Cancel Task** to stop immediately
- Useful if you triggered a search by mistake

Optimizing Auto-Collection

Start Conservative

- Begin with 6-12 hour check intervals
- Use moderate relevance thresholds (60-70)
- Select 2-3 high-quality news providers
- Monitor for a week, then adjust

Reduce Noise

- Increase relevance threshold if too many low-value articles
- Enable duplicate detection
- Exclude specific sources in provider settings
- Refine keywords to be more specific

Increase Coverage

- Add more news providers
- Lower relevance threshold slightly (50-60)
- Expand search date range
- Add more keyword variations

Reading the Dashboard

Prioritize by Status

1. **Accelerating** trends (potential breaking news)
2. High alert counts (lots of new content)
3. Groups you haven't checked in 24+ hours

Use Sparklines

- Sharp spikes = breaking story
- Sustained growth = ongoing campaign
- Flat lines = stable monitoring (expected for some topics)

Manage Alert Overload

- Bulk select and mark as read
- Delete obvious noise immediately
- Use the "Analyze Selected" feature for batch processing
- Consider disabling noisy keyword groups

Troubleshooting

"No articles appearing after Update Now"

Possible Causes:

- Keywords too specific (no matching articles exist)
- Date range too narrow (expand to 7-14 days)
- News providers not returning results (check provider status)
- API rate limits exceeded (wait or increase daily limit)

Solutions:

1. Check **Manage Keywords** to verify keywords are enabled
2. Click **Auto-Collect** to verify news providers are selected
3. Try broader keywords temporarily to test
4. Check error messages in the status ticker

"Too many irrelevant articles"

Possible Causes:

- Keywords too broad (matching unrelated content)
- Relevance threshold too low (auto-approving everything)
- Search fields including noisy content (description/content)

Solutions:

1. Increase relevance threshold in Auto-Collect settings (try 70-80)
2. Make keywords more specific (add context or operators)
3. Enable duplicate detection
4. Search title only (uncheck description/content)
5. Review and delete noisy articles, then adjust keywords

"Auto-processing not running"

Possible Causes:

- Auto-Processing toggle is OFF
- Check interval too long (24 hours)
- Background worker not running (server issue)

Solutions:

1. Verify the Auto-Processing toggle is **ON** (top-right)
2. Click **Auto-Collect** and verify "Enable Auto-Collection" is checked
3. Check "Last search" time to see if it's running at all
4. Use **Update Now** to manually trigger (tests the pipeline)
5. Contact administrator if manual updates work but auto doesn't

---

"Processing jobs stuck"

Possible Causes:

- Large number of articles being processed
- AI scoring taking longer than expected
- Background worker crashed

Solutions:

1. Wait 5-10 minutes (large jobs take time)
2. Click **Cancel Task** to stop the current job
3. Refresh the page and check status
4. Try **Update Now** again with fewer keyword groups enabled

---

"Rate limit exceeded"

Possible Causes:

- Too many API requests in 24 hours
- Check interval too frequent (every 15 min)
- Many keyword groups with overlapping searches

Solutions:

1. Increase check interval (6-12 hours recommended)
2. Reduce the number of active keyword groups
3. Increase "Daily Request Limit" in Auto-Collect settings
4. Wait 24 hours for rate limit to reset
5. Consider upgrading news provider API tier

Advanced Features

Bulk Operations

Bulk Delete:

- Select multiple articles with checkboxes

- Click **Delete Selected** in toolbar
- Quickly clear noise without reviewing each article

Bulk Analyze:

- Select articles of interest
- Click **Analyze Selected**
- Run AI analysis, entity extraction, or classification in batch

Need Help?

Support

For additional support or to report issues, contact your Aunoo AI administrator or visit the support documentation.

Last updated: 2025-11-25

Keyword Monitoring

Keyword Monitor

The Keyword Monitor page allows you to organize and manage keywords into groups for automated news monitoring. Keywords are organized by topic and used by the Auto-Collect system to find relevant articles.

Set Up Topic
Opens the onboarding wizard to configure a new topic. Topics are high-level categories that contain keyword groups.

New Group
Creates a new keyword group within an existing topic.

Keyword Groups

Each keyword group represents a collection of related keywords that the system monitors together.

Group Card Information

Each group card displays:

- Group Name - Descriptive name for the keyword collection
- Topic Badge - Shows which topic this group belongs to
- Monitored Keywords - List of keywords being tracked
- Action Buttons - Add keywords or delete the group

Creating a New Keyword Group

Steps:

1. Click the New Group button
2. Fill in the modal form:

Group Name

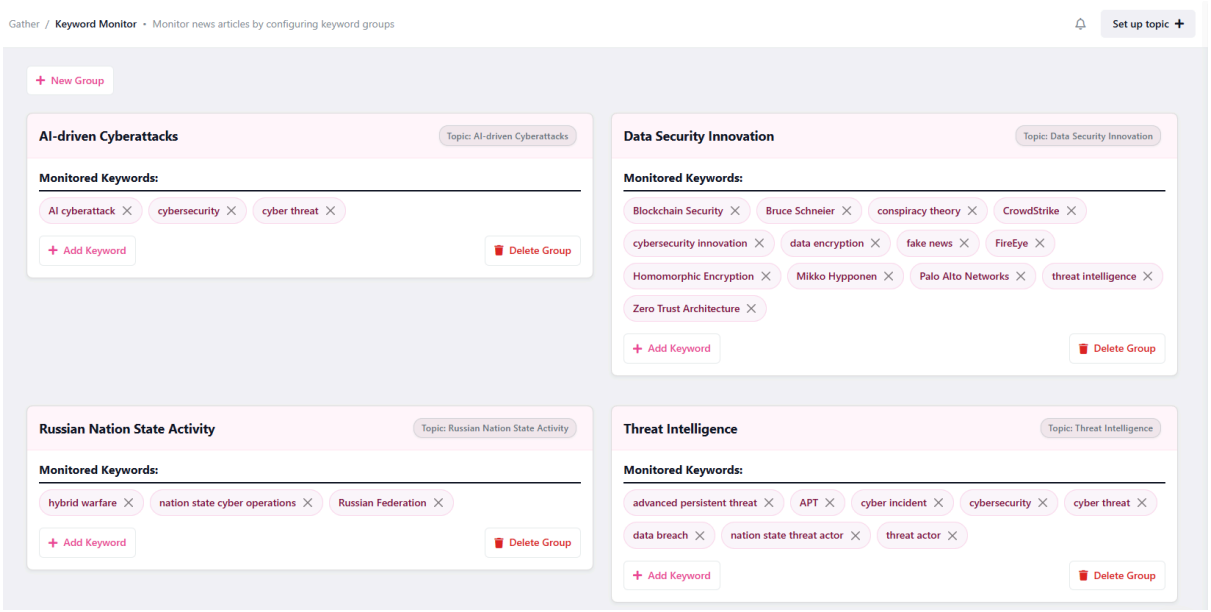
A descriptive name for this keyword collection.

Examples:

- "AI Safety News"
- "Cloud Computing Updates"
- "Cybersecurity Threats"

Topic

Select which topic this group belongs to. Topics are high-level categories for organizing your monitoring.



Managing Keywords

Adding Keywords to a Group

1. Click Add Keyword on the desired group card
2. Enter your keyword or phrase in the modal

Keyword or Phrase

Enter the term you want to monitor. Supports advanced search operators:
Search Operators:

- Exact Phrases - Use quotes for exact matching
    - Example: "artificial intelligence"
- OR Operator - Match any of the alternatives
    - Example: AI OR "artificial intelligence"
- AND Operator - Match combinations
    - Example: AI AND safety

Tips:

- Use specific phrases to reduce noise
- Combine operators for precise matching
- Test with a few keywords before adding many

Group Organization Tips:

By Topic:

- Keep groups focused on specific sub-topics

- Example: Under "Technology" topic, create groups for "AI", "Cloud", "Security"

By Specificity:

- Broad group: General industry terms
- Narrow group: Specific product names or events

By Priority:

- High-priority: Critical terms needing immediate attention
- Low-priority: Background monitoring terms

Removing Keywords

Click the × button on any keyword badge to remove it from the group. The system will ask you to confirm before deleting.

Deleting Keyword Groups

Click Delete Group to remove an entire keyword group and all its keywords.

Warning: This action cannot be undone. All keywords in the group will be permanently deleted. The system will ask you to confirm before deleting.

How Keyword Groups Work

Integration with Auto-Collect

Keywords defined here are used by the Auto-Collect system (configured on Keyword Alerts page) to:

- Search News APIs - System queries providers with your keywords
- Find Matches - Articles matching keywords are retrieved
- Score Relevance - AI determines how relevant each article is
- Apply QC - Quality control filters low-quality articles
- Save Results - Approved articles are saved to your database

Workflow:

1. Create Groups - Organize keywords by topic and subject area
2. Add Keywords - Define what terms to monitor in each group
3. Auto-Collection - System automatically searches for matching articles (configured on Keyword Alerts page)
4. Processing - Articles are scored and filtered (configured on Keyword Alerts page)
5. Review - View results on the Keyword Alerts page

Best Practices

Keyword Management	Group Organization
● Start Small ○ Begin with 5-10 keywords per group ○ Add more based on results quality ● Use Specific Phrases ○ "machine learning model training" is better than just "ML" ○ Reduces irrelevant matches ● Combine Operators ○ Use AND/OR for precise control ○ Example: ("data breach" OR "security incident") AND healthcare ● Test Keywords ○ Add a few keywords ○ Review results on Keyword Alerts page ○ Refine based on relevance ● Regular Maintenance ○ Remove keywords that generate too much noise ○ Add new terms as topics evolve	● Logical Grouping ○ Group related concepts together ○ Makes it easier to manage and review ● Clear Naming ○ Use descriptive group names ○ Include the focus area or domain ● Topic Alignment ○ Ensure groups match their parent topic ○ Helps with filtering and organization ● Don't Over-Segment ○ Too many small groups becomes hard to manage ○ Balance granularity with manageability

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API Usage Tracking

The system tracks API usage to prevent exceeding daily limits. Usage information is displayed on the Keyword Alerts page.

What Counts as an API Request:

- Each keyword search counts as one request
- Multiple keywords = multiple requests
- Searches run based on your Auto-Collection schedule

Managing API Usage:

- Set appropriate check intervals (less frequent = fewer requests)
- Balance coverage with API limits
- Monitor usage on Keyword Alerts page

Troubleshooting

No Keywords Appearing

- Ensure you've added keywords to the group
- Check that the group was created successfully
- Refresh the page

Keywords Not Finding Articles

- Verify keywords are spelled correctly
- Check Auto-Collect settings on Keyword Alerts page
- Ensure Auto-Collection is enabled
- Review API usage limits

Can't Create Group

- Ensure you've selected a valid topic
- Verify group name is filled in
- Check for duplicate group names

Settings Not Available

- Settings have moved to the Keyword Alerts page
- Click "Go to Auto-Processing Settings" button
- Access via /keyword-alerts URL

Submit Articles

Submiting Articles

Overview

You can manually submit articles for intelligence that wasn't captured by automated keyword monitoring. Whether you found an important article on social media, received a tip from a colleague, or discovered content behind a paywall, You can submit articles manually to analyze and enrich them with AI-powered insights before adding them to your intelligence database.

How to submit articles manually

Submit Articles provides manual control over your intelligence pipeline:

- **URL Analysis**: Fetch and analyze articles from any URL
- **Bulk Processing**: Submit up to 50 URLs at once for batch analysis
- **Paste Content**: Add articles that can't be accessed via URL (paywalled, private, etc.)
- **AI Enrichment**: Automatic summarization, entity extraction, and topic classification
- **Quality Control**: Review AI analysis before saving to your database
- **Recent History**: Track recently enriched articles in one place

When to submit articles manually

While **the News Firehose** automates keyword-based collection, submitting articles is essential for:

- **Social Media Finds**: Articles shared on Twitter, LinkedIn, threat intel communities
- **Analyst Tips**: Content recommended by colleagues or partners
- **Paywalled Content**: Premium sources requiring subscriptions
- **Non-News Sources**: Blog posts, research papers, vendor advisories
- **Manual Curation**: High-value content that doesn't match your keywords
- **One-Time Searches**: Specific topics you don't want to monitor continuously

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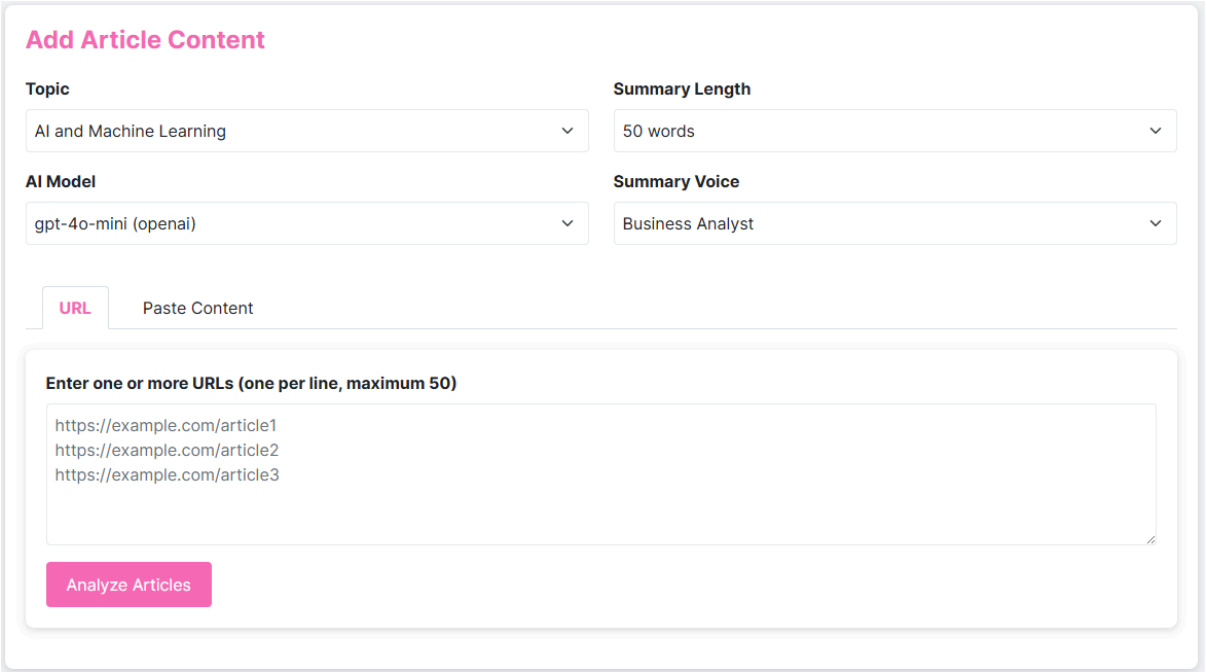
Getting Started

Step 1: Configure Common Settings

Before submitting articles, set your analysis preferences (these apply to all submissions):



Topic

- Select the primary topic category (e.g., "Ransomware", "APT Groups", "Critical Vulnerabilities")
- This determines how the article is tagged and categorized
- Choose the most specific topic that fits

AI Model

- Select which AI model performs the analysis
- Options typically include GPT-4, Claude, or other configured models
- Better models = better analysis, but may cost more per article

Summary Length

- **40 words**: Ultra-brief (good for scanning)
- **50 words**: Default (balanced detail)
- **75 words**: Detailed (more context)
- **100 words**: Comprehensive (full picture)
- **Custom**: Specify your own word count

Summary Voice

Choose the analysis perspective:

- **Business Analyst**: Strategic, ROI-focused
- **Industry Analyst**: Market trends, competitive landscape
- **Tech Journalist**: Clear, accessible explanations
- **Investment Advisor**: Financial implications, risk assessment
- **Principal Security Engineer**: Technical depth, implementation details
- **CISO**: Executive security perspective, compliance, risk management
- **Custom**: Write your own voice/persona

Tip: For threat intelligence, **CISO** or **Principal Security Engineer** voices work best.

Step 2: Choose Your Input Method

Submit Articles offers two modes:

Method 1: URL Submission (Most Common)

Best for: Articles accessible online via direct links

Single URL

1. Switch to the **URL** tab (default)
2. Enter one URL in the text area
3. Click **Analyze Articles**
4. Wait for the AI to fetch and analyze (15-30 seconds)
5. Review the analysis result
6. Click **Save Article** to add to your database

Bulk URLs (Up to 50)

1. Switch to the **URL** tab
2. Enter multiple URLs, **one per line**:

   https://example.com/article1

   https://example.com/article2

   https://example.com/article3

3. Maximum 50 URLs (system enforced)
4. Click **Analyze Articles**
5. Wait for batch processing (30-90 seconds depending on count)
6. Review all results in the **Analysis Results** table
7. Click **Save All Articles** to add them to your database

Notes:

- URLs are processed in parallel for speed
- Failed fetches (404, paywall, etc.) will show errors
- You can save individual articles or all at once

Method 2: Paste Content

Best for: Premium articles, PDFs, private documents, or content you copied elsewhere

1. Switch to the **Paste Content** tab

2. Fill in the required fields:

    - **Article Title**: The headline (required)
    - **Article Source**: Publisher name (e.g., "The New York Times", "TechCrunch")
    - **Publication Date**: When it was published (optional but recommended)
    - **Source URL**: Where you found it (required—even if paywalled)
    - **Article Content**: Paste the full text (required)

3. Click **Analyze Article**

4. Wait for AI analysis (15-30 seconds)

5. Review the analysis result

6. Click **Save Article** to add to your database

Understanding the Analysis Result

After submission, the AI generates a comprehensive analysis:

Article Metadata

- **Title**: Extracted or provided title
- **Source**: Publisher name
- **Publication Date**: When it was published
- **URL**: Original article link
- **Topic**: Your selected category

AI-Generated Summary

- Condensed overview in your chosen length (40-100 words)
- Written in your selected voice/persona
- Captures key points, not just first paragraph
- Useful for quick scanning and executive briefings

Reviewing & Saving Articles

Before You Save

Quality Check:

- Does the summary accurately represent the article?
- Are entities correctly identified?
- Is the topic classification appropriate?
- Does the threat level seem right?

Common Issues:

- **Inaccurate Summary**: Change Summary Voice or Length and resubmit
- **Wrong Topic**: Go back and select a different topic before resubmitting
- **Missing Entities**: AI may miss some—you can edit after saving
- **Paywall Content**: Use "Paste Content" method instead

Recently Enriched Articles Panel

The bottom of the Submit Articles page shows your recent submissions:

What's Shown

- Last 10-20 articles you've enriched
- Sorted by submission time (newest first)
- Includes metadata, summary, and analysis

Actions

- **View Details**: Click to expand full analysis
- **Edit**: Modify topic, tags, or entities
- **Delete**: Remove from database if saved in error
- **Re-analyze**: Run analysis again with different settings

Troubleshooting

"Failed to fetch URL"

Possible Causes:

- URL is behind paywall or login
- Website blocks automated scraping
- URL is broken (404, 500 error)
- Timeout (very slow website)

Solutions:

1. Verify the URL loads in your browser
2. If paywalled, switch to **Paste Content** method

3. If 404, find the correct URL
4. If scraping blocked, copy content and use **Paste Content**

"Analysis result seems off"

Possible Causes:

- Wrong topic selected
- Voice/persona doesn't fit content type
- AI model hallucinating or misinterpreting
- Article is low-quality or poorly written

Solutions:

1. Click **Clear** and resubmit with different settings
2. Try a different AI model
3. Change Summary Voice to better fit content
4. For technical content, use "Principal Security Engineer" voice
5. Manually edit after saving if only minor issues

"URL limit exceeded"

Possible Causes:

- Pasted more than 50 URLs
- URLs contain line breaks or extra whitespace

Solutions:

1. Count your URLs (one per line)
2. Remove any blank lines
3. Split into multiple batches if > 50 URLs
4. Submit first 50, then submit remaining URLs separately

"Batch processing stuck"

Possible Causes:

- One or more URLs taking very long to fetch
- API rate limits or quotas exceeded
- Background worker overloaded

Solutions:

1. Wait 2-3 minutes (some sites are slow)
2. Refresh the page if no progress after 5 minutes
3. Resubmit URLs individually to identify problem URL
4. Check API usage/quotas in settings
5. Contact administrator if persistent

Advanced Features

Custom Summary Voice

If pre-defined voices don't fit your needs:

1. Select "Custom" in Summary Voice dropdown
2. Enter a custom persona, e.g.:
    - "Military intelligence analyst focused on state-sponsored threats"
    - "SOC analyst prioritizing IOCs and tactical response"
    - "Board member concerned with business continuity and reputation"
3. AI will adapt its analysis to your custom voice

Need Help?

Support

For additional support or to report issues, contact your Aunoo AI administrator or visit the support documentation.

Last updated: 2025-11-25

Doing Research - Using the Explore View

Doing Research using the Explore View

Explore View is your central hub for intelligence research and analysis. This unified workspace brings together three powerful tools: **Article Investigator**, **Narrative Explorer**, and **Six Articles**.

The Three Pillars of Explore View

1. Article Investigator

Best for: Hands-on research and detailed article review

Your primary workspace for exploring, filtering, and managing individual threat intelligence articles. Perfect for:

- Daily threat intelligence monitoring
- Incident response research
- Finding specific articles or sources
- Exporting raw intelligence data

→ Read the full Article Investigator guide

2. Narrative Explorer

Best for: Understanding themes, patterns, and connections

AI-powered analysis that reveals the story behind the news. Identifies emerging narratives, thematic clusters, and strategic insights across multiple articles. Perfect for:

- Trend analysis and pattern recognition
- Threat hunting across APT campaigns
- Strategic planning and forecasting
- Identifying research gaps

→ Read the full Narrative Explorer guide

3. Six Articles

Best for: Executive briefings and strategic communication

Curated executive briefing tool that selects and analyzes the most strategically relevant articles. Delivers actionable intelligence in 8-12 minutes. Perfect for:

- Daily executive briefings
- C-suite and board presentations
- Crisis monitoring and rapid assessment

- Weekly strategic digests

→ Read the full Six Articles guide

Key Features Across All Tools

Shared Filters

All three tools use the same top-level filters:

- **Topics**: Select threat intelligence categories
- **Date Range**: Choose your time window
- **Sources**: Filter by publisher (optional)

Change these filters once, and they apply across all tools.

Cross-Tool Navigation

- Click article titles to open full article view
- Bookmark articles in Article Investigator, reference in other tools
- Export from any tool maintains links back to source articles

Export Options

Each tool offers appropriate export formats:

- **Article Investigator**: CSV, PDF, Markdown (raw data)
- **Narrative Explorer**: Markdown, HTML (insights and themes)
- **Six Articles**: Markdown, HTML, PDF, Podcast (executive briefing)

Tips for Maximum Efficiency

Start Broad, Then Focus

1. Begin in **Article Investigator** to see everything
2. Hide noise and identify areas of interest
3. Use **Narrative Explorer** to understand patterns
4. Use **Six Articles** to brief others on key findings

Leverage Personas

- Use **CISO** persona for security team briefings
- Use **CEO** persona for board presentations

- Use **CTO** persona for engineering leadership
- Compare personas to see different strategic angles

Quick Start: Which Tool Should I Use?

Choose by Your Goal

Your Goal	**Use This Tool**	**Why**
"What happened today?"	**Article Investigator**	Browse all articles, hide irrelevant ones, bookmark important findings
"What are the important stories?"	**Six Articles**	AI selects and analyzes the top 6 most relevant articles for your role
"What's the bigger picture?"	**Narrative Explorer**	Reveals themes, patterns, and connections across many articles
"I need to find something specific"	**Article Investigator**	Advanced filtering by topic, source, entity, date
"I need to brief executives"	**Six Articles**	Persona-specific insights with executive actions and strategic relevance
"I'm threat hunting"	**Narrative Explorer**	Cross-article pattern recognition and thematic clustering

Choose by Your Audience

Your Audience	**Recommended Tool**	**Output Format**
Yourself (research)	Article Investigator	Multiple view modes, filtering
Your team (collaboration)	Narrative Explorer	Thematic insights with research suggestions
Your manager (weekly update)	Six Articles	Strategic analysis with executive takeaways

Your Audience	Recommended Tool	Output Format
C-suite/Board (strategic briefing)	Six Articles	CEO/CISO persona analysis, PDF export
Security operations (tactical)	Article Investigator	CSV export, detailed article data
Threat intelligence analysts (strategic)	Narrative Explorer	Pattern analysis, emerging threats

Choose by Time Available

Time Available	Recommended Workflow
5 minutes	Six Articles → Scan Executive Takeaways only
15 minutes	Six Articles → Read full analysis of 6 curated articles
30 minutes	Article Investigator → Filter and review in Card View, export findings
1 hour	Narrative Explorer → Generate insights, explore themes, click through to articles
Deep dive	Article Investigator + Narrative Explorer + Six Articles Deep Dive tools

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Troubleshooting

"I don't see any articles"

- Check your date range (expand to last 7 days)
- Verify at least one topic is selected
- Click "Refresh" or "Load Articles"
- Check internet connection

"Results aren't relevant"

- **Article Investigator**: Apply more specific topic filters
- **Narrative Explorer**: Narrow to 3-5 focused topics
- **Six Articles**: Switch to a more specific persona (CISO vs CEO)

"It's taking too long"

- **Article Investigator**: Use pagination instead of "Show All"
- **Narrative Explorer**: Reduce date range (30 days → 7 days)
- **Six Articles**: Reduce article count (6 → 4)

"I'm overwhelmed by information"

1. Start with **Six Articles** (6 curated articles only)
2. Read just the Executive Takeaways
3. Deep dive on 1-2 critical items
4. Come back to Article Investigator only if needed

Getting Help

Support

For additional support or to report issues, contact your Aunoo AI administrator or visit the support documentation.

Last updated: 2025-11-25

Article Investigator

Getting Started with Article Investigator

Article Investigator is your primary workspace for exploring, analyzing, and managing threat intelligence articles. This powerful tool provides multiple viewing modes, advanced filtering, and export capabilities to help you quickly find and assess the information that matters most.

What is Article Investigator?

Article Investigator is designed for hands-on intelligence research, offering:

- **Multiple View Modes**: Switch between card, table, HUD, and reader layouts
- **Advanced Filtering**: Narrow results by topic, date, source, and more
- **Quick Actions**: Hide irrelevant articles, bookmark important ones, and restore hidden items
- **Export Options**: Save your findings as CSV, PDF, or Markdown
- **Pagination Controls**: Navigate large article sets efficiently

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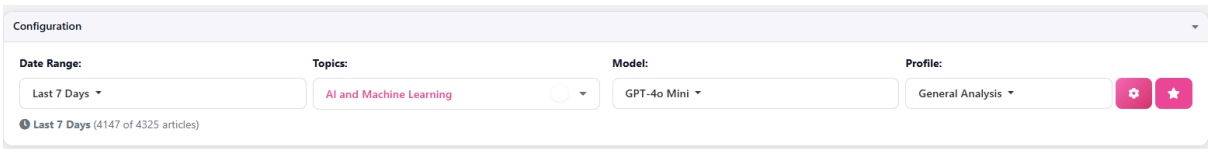
Getting Started

Step 1: Select Your Data Source

1. At the top of the page, choose your focus:

    - **Topics**: Select one or more threat intelligence categories (e.g., APT Groups, Malware, Vulnerabilities)
    - **Date Range**: Pick a time period using the date picker
    - **Sources** (optional): Filter by specific news outlets or feeds

2. Click the **Load Articles** or **Refresh** button to fetch matching articles



Step 2: Choose Your View Mode

The Article Investigator offers four distinct viewing modes. Select the one that fits your workflow:

Card View (Default)

- **Best for**: Visual browsing and quick assessment

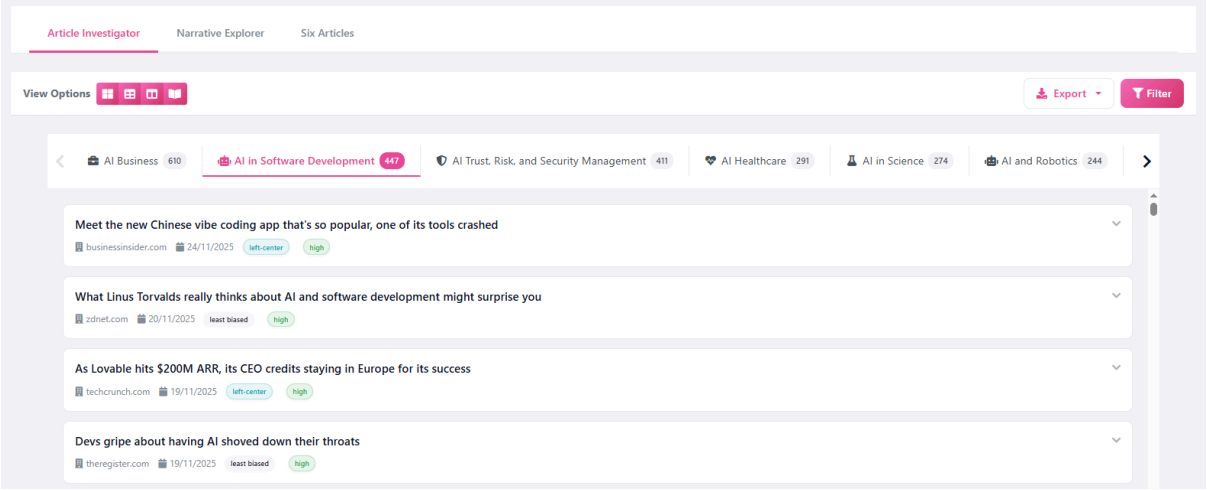
- **Shows**: Article title, source, date, summary, and key metadata
- **Actions**: Click to expand, hide unwanted articles, or bookmark

Table View (Techmeme Style)

- **Best for**: Scanning headlines quickly
- **Shows**: Condensed list with title, source, and date
- **Actions**: Compact format for fast review of many articles

HUD View

- **Best for**: Side-by-side comparison and deep analysis
- **Shows**: Split-pane layout with article list and content preview
- **Actions**: Click an article to view full content without leaving the page



Reader View

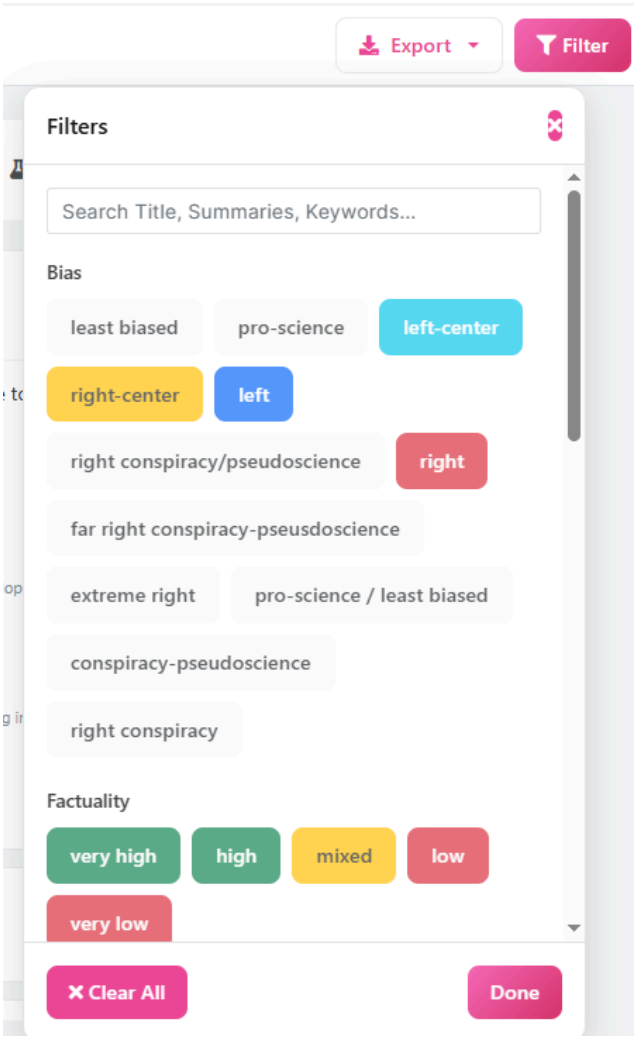
- **Best for**: Focused reading of full article text
- **Shows**: Clean, distraction-free article content
- **Actions**: Navigate between articles with keyboard or buttons

Step 3: Filter and Refine

Click the **Filter** button in the toolbar to access advanced filtering options:

- **Topics**: Narrow to specific threat categories
- **Date Range**: Adjust your time window
- **Sources**: Include or exclude specific publishers
- **Entities**: Filter by mentioned organizations, threat actors, or technologies
- **Bias/Credibility**: Filter by media bias or source credibility scores

Apply filters, then click **Done** to see updated results.



Key Features

Article Actions

Each article card or row provides quick actions:

- **Expand/Collapse**: Click the title or expand icon to view full details
- **Hide Article**: Remove irrelevant articles from your view (click the X or hide icon)
- **Bookmark**: Mark important articles for later review
- **Open in New Tab**: Click the external link icon to view the original source

Toolbar Options

The toolbar at the top of Article Investigator provides:

- **View Options**: Toggle between card, table, HUD, and reader modes
- **Export**: Download current results as CSV, PDF, or Markdown

- **Filter**: Access advanced filtering controls
- **Restore Hidden**: Unhide articles you previously removed (appears when articles are hidden)

Pagination

Navigate large article sets using pagination controls at the bottom:

- **Show All**: Display all articles on one page (use with caution for large sets)
- **Paginated Mode**: Browse 25 articles at a time (default)
- **Page Navigation**: Use Previous/Next buttons or jump to a specific page

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Common Workflows

Daily Intelligence Review

1. Set date range to "Last 24 hours" or "Today"
2. Select your primary focus topics (e.g., APT Groups, Ransomware)
3. Use **Card View** to quickly scan headlines and summaries
4. Hide irrelevant articles as you go
5. Bookmark critical findings for follow-up
6. Export bookmarked articles as PDF for team distribution

Incident Response Research

1. Filter by specific entities (threat actor, malware family, or CVE)
2. Expand date range to capture historical context (7-30 days)
3. Switch to **HUD View** for side-by-side article comparison
4. Read full article content without leaving the page
5. Export findings as Markdown for incident reports

Trend Analysis

1. Select multiple related topics (e.g., all ransomware categories)
2. Set a longer date range (30-90 days)
3. Use **Table View** to quickly scan for patterns
4. Filter by high-credibility sources only
5. Export as CSV for further analysis in spreadsheets

Executive Briefing Preparation

1. Filter to last 7 days
2. Focus on high-impact topics (APT Groups, Critical Vulnerabilities)
3. Hide low-value or duplicate articles
4. Switch to **Reader View** to read full context
5. Export final selection as PDF with clean formatting

Tips & Tricks

Keyboard Shortcuts

- **Arrow Keys**: Navigate between articles in Reader View
- **Esc**: Close expanded article cards
- **Ctrl/Cmd + Click**: Open article in new tab

Efficient Filtering

- Start broad, then narrow: Begin with all articles, hide irrelevant ones, then apply filters to refine
- Save common filters: Bookmark your browser page with filter parameters for quick access
- Use entity filters: More precise than topic filters for specific threats

Managing Article Overload

- Use pagination for sets over 100 articles
- Hide articles aggressively during first pass
- Focus on sources you trust most
- Set narrower date ranges (3-7 days) for focused research

View Mode Selection

- **Morning briefing**: Use Table View for speed
- **Deep research**: Use HUD View for context
- **Long-form reading**: Use Reader View for focus
- **Presenting findings**: Use Card View for visual clarity

Troubleshooting

No articles appearing?

- Verify your date range includes recent dates
- Check that at least one topic is selected
- Clear all filters and try again
- Refresh the page to reload article data

Articles loading slowly?

- Narrow your date range (fewer days = faster loading)
- Select fewer topics to reduce result set
- Use paginated mode instead of "Show All"
- Check your internet connection

Filters not working?

- Click "Apply" or "Done" after changing filter settings
- Clear browser cache if filters seem stuck
- Try clicking "Clear All" and reapplying filters

Export not generating?

- Ensure you have articles loaded before exporting
- Try a smaller date range if export times out
- Check browser's download folder for completed exports
- Disable popup blockers if PDF export fails

Advanced Features

Hidden Articles Management

- View count of hidden articles in toolbar badge
- Click **Restore Hidden** to unhide all previously hidden articles
- Hidden articles persist during your session but reset on page refresh

Multi-Select Operations

- Hold Shift and click to select a range of articles (coming soon)
- Bulk hide or bookmark multiple articles at once (coming soon)

Smart Sorting

- Articles automatically sort by relevance and recency
- Most significant threats appear first
- Adjust sorting in filter dropdown (coming soon)

Need Help?

For additional support or to report issues, contact your Aunoo AI administrator or visit the support documentation.

Last updated: 2025-11-25

Narrative Explorer

Getting Started with Narrative View

Overview

Narrative View reveals the story behind the news. This AI-powered feature analyzes themes, patterns, and key developments across your selected articles to help you understand the bigger picture in threat intelligence reporting.

What is Narrative View?

Narrative View goes beyond individual articles to identify:

- **Thematic Clusters**: Related articles grouped by shared themes and narratives
- **Emerging Patterns**: Connections and trends across multiple stories
- **Key Insights**: AI-generated summaries highlighting important developments
- **Research Angles**: Suggested areas for deeper investigation

How to Use Narrative View

Step 1: Select Your Focus

1. Navigate to the **Narrative Explorer** tab in the main navigation
2. Click on the **Narratives** sub-tab (lightbulb icon)
3. Use the filters at the top of the page to select:
    - **Topics**: Choose one or more threat intelligence categories
    - **Date Range**: Select the time period to analyze (recommended: 3-7 days for focused insights)

Step 2: Generate Insights

1. Click the **Generate Narrative Insights** button
2. Wait while the AI analyzes your selected articles (this may take 30-60 seconds)
3. Results will appear as interactive cards on the page

Step 3: Explore Results

Each narrative card shows:

- **Theme Title**: A descriptive name for the narrative cluster
- **Summary**: AI-generated overview of the key developments
- **Related Articles**: Links to source articles that support this narrative
- **Research Suggestions**: Recommended follow-up questions and investigation angles

Best Practices

Start Focused

Begin with a narrow scope for the most relevant insights:

- Select 1-3 related topics
- Use a 3-7 day date range
- Review results, then expand your search if needed

Compare Time Periods

Run narrative analysis across different time windows to identify:

- How stories evolve over time
- Emerging vs. declining themes
- Shifts in threat actor behavior or tactics

Combine with Other Views

Use Narrative View alongside:

- **Article Investigator**: For detailed article-by-article review
- **Highlights**: For specific incident tracking
- **Investigators**: For custom monitoring and alerts

Tips & Tricks

- **Refresh Regularly**: Re-run analysis after new articles arrive to catch breaking developments
- **Export Results**: Use the export options to save insights for reports or presentations
- **Cross-Reference**: Click through to related articles to verify AI interpretations
- **Refine Filters**: Narrow your topic selection if results feel too broad or unfocused

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Troubleshooting

No results appearing?

- Verify you have articles in the selected date range and topics
- Try expanding your date range or topic selection
- Check that filters are not excluding all articles

Results seem too generic?

- Narrow your topic selection to more specific categories

- Reduce the date range for more focused analysis
- Try filtering by specific sources or entities

Analysis taking too long?

- Large date ranges (30+ days) with many topics can take 2-3 minutes
- Consider breaking the analysis into smaller time windows
- Check your internet connection if the request times out

Need Help?

For additional support or to report issues, contact your Aunoo AI administrator or visit the support documentation.

Last updated: 2025-11-25

Six Articles

Getting Started with Six Articles

Six Articles is your executive briefing tool, designed to transform overwhelming intelligence feeds into a curated, actionable digest for senior leadership. This AI-powered feature selects and analyzes the most strategically relevant articles, providing executive-level insights in a format optimized for time-constrained decision-makers.

What is Six Articles?

Six Articles delivers research-backed intelligence curation:

- **Smart Selection**: AI identifies the most relevant articles from your data set
- **Executive Analysis**: Each article includes strategic takeaways, actions, and impact assessments
- **Persona-Specific**: Tailored insights for CEO, CTO, CISO, or CMO perspectives
- **Time-Optimized**: 8-12 minute reading experience for morning briefings
- **Export-Ready**: One-click export to Markdown, HTML, PDF, or audio podcast

Why "Six" Articles?

The number isn't arbitrary. It's actually backed by research:

- **Cognitive Load**: Executives can effectively process 5-9 distinct items (Miller's Law)
- **Diversity**: Six articles cover multiple domains without overwhelming
- **Time Constraint**: Six curated articles take 8-12 minutes to read
- **Decision Quality**: Research shows decision quality plateaus after 5-7 data points

According to the Stagwell "Future of News" Study, CEOs and board directors view news media as a powerful tool for:

- **Forecasting**: Identifying emerging trends before they become mainstream
- **Risk Management**: Early detection of regulatory, competitive, and reputational threats
- **Stakeholder Engagement**: Understanding how narratives shape perceptions

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Getting Started

Step 1: Set Your Context

1. Navigate to the **Six Articles** tab in the main navigation
2. Use the filters at the top of the page:

- **Topics**: Select threat intelligence categories relevant to your organization
- **Date Range**: Choose your time window (typically last 24-48 hours for daily briefings)

Step 2: Configure Settings

Click the **Settings** dropdown to customize:

Target Persona

Choose the executive perspective for analysis:

- **CEO**: Strategic positioning, market dynamics, organizational impact
- **CTO**: Technical architecture, innovation, engineering implications
- **CISO**: Security posture, threat assessment, compliance risks
- **CMO**: Brand reputation, customer perception, market positioning

Article Count

Select how many articles to analyze (3-8 articles):

- **3-4 articles**: Quick daily scan for time-constrained executives
- **6 articles**: Optimal balance (recommended default)
- **7-8 articles**: Deep dive mode for research-intensive roles or weekly digests

Step 3: Generate Your Briefing

1. Click the **Write** button in the toolbar
2. Wait 30-90 seconds while the AI:
    - Analyzes all available articles in your selected range
    - Selects the most strategically relevant articles
    - Generates executive-level insights for each
3. Review the generated briefing

Step 4: Explore the Analysis

Each article in your briefing includes:

Executive Takeaway

A critical insight summarized in ~15 words—designed for rapid scanning.

Strategic Relevance

Why this article matters for your role, with context about business impact and organizational implications.

Time Horizon

When the impact will be felt:

- **Immediate**: Action required this week

- **Medium-term**: Planning needed within 1-3 months
- **Long-term**: Strategic positioning for 6+ months

Risk/Opportunity Assessment

Clear classification to help prioritize response:

- **Risk**: Potential threat requiring mitigation
- **Opportunity**: Strategic advantage to pursue
- **Mixed**: Both upside and downside considerations

Executive Actions

Specific, actionable next steps you can take—not generic recommendations.

Selection Scores

Transparency into why this article was chosen:

- **Relevance** (1-5): Alignment with your topics and persona
- **Novelty** (1-5): New information vs. already known
- **Credibility** (1-5): Source trustworthiness
- **Representativeness** (1-5): How well it represents the broader trend

Key Features

Deep Analysis Tools

Each article card provides options for deeper investigation:

- **Deep Dive**: Multi-source analysis with broader context
- **Consensus Analysis**: Compare perspectives across multiple sources
- **Impact Timeline**: Project short/medium/long-term implications
- **Ask Auspex**: Interactive Q&A about the article
- **SWOT Analysis**: Structured strengths/weaknesses/opportunities/threats breakdown
- **Scenario Planning**: Explore different futures based on the article's themes

Export Options

Share your briefing with stakeholders:

- **Export Markdown**: Plain text format for email or Slack
- **Six Articles Markdown**: Focused export of just the six articles
- **Download HTML (Classic)**: Simple HTML for archiving
- **Download HTML (Enhanced)**: Styled HTML with branding
- **Export to PDF**: Professional document for presentations or printing

Generate Podcast

Click the **Podcast** button to:

- Convert your briefing to an AI-narrated audio file
- Listen during commutes or while multitasking
- Choose voice (Rachel by default) and length (90 seconds recommended)

Advanced Configuration

Click the **Config** button for power-user options:

- **System Prompt**: Customize the AI's analysis instructions
- **Persona Profiles**: Define custom executive personas beyond the defaults
- **Output Schema**: Adjust which fields appear in the analysis
- **Selection Criteria**: Fine-tune how articles are scored and selected

Common Workflows

Daily Executive Briefing (Most Common)

1. Set date range to "Last 24 hours"
2. Select 3-5 core topics (APT Groups, Ransomware, Critical Vulnerabilities)
3. Choose **CEO** or **CISO** persona
4. Set article count to **6**
5. Click **Write**
6. Review in 8-12 minutes
7. Export as PDF for leadership distribution

Weekly Digest

1. Set date range to "Last 7 days"
2. Select broader topic coverage (8-10 topics)
3. Choose **CEO** persona for strategic focus
4. Set article count to **8** for comprehensive coverage
5. Click **Write**
6. Export as Enhanced HTML for team sharing

Crisis Monitoring

1. Set date range to "Last 6 hours" or "Today"
2. Filter to specific incident-related topics
3. Choose **CISO** persona for risk focus
4. Set article count to **3-4** for rapid assessment
5. Click **Write**
6. Use Deep Dive tools for critical articles
7. Export as Markdown for Slack/Teams

Board Preparation

1. Set date range to "Last 30 days"
2. Select high-level strategic topics

3. Choose **CEO** persona
4. Set article count to **6**
5. Click **Write**
6. Use Scenario Planning tools for each article
7. Export as PDF for board materials

Tips & Tricks

Getting the Best Results

- **Narrow your topics**: Fewer, more focused topics yield better article selection
- **Match persona to audience**: Use CISO for security teams, CEO for board meetings
- **Refresh daily**: Run Six Articles each morning for consistent briefings
- **Experiment with count**: Try 4 articles for speed, 7-8 for depth

Time-Saving Strategies

- **Use Podcast mode**: Listen during commutes or between meetings
- **Bookmark the page**: Save with your preferred settings in the URL
- **Set up a routine**: Same time daily (e.g., 7 AM) for consistency
- **Export for sharing**: Send to leadership before their morning coffee

Advanced Usage

- **Compare personas**: Generate briefings with CEO and CISO personas to see different angles
- **Track over time**: Export daily briefings to watch trend evolution
- **Combine with Narrative View**: Use Six Articles for daily scan, Narrative View for deeper patterns
- **Custom prompts**: Use Config modal to tailor analysis to your organization's specific needs

Understanding Article Selection

The AI selects articles based on a sophisticated scoring system:

Selection Criteria

1. **Relevance**: How well the article matches your topics and persona priorities
2. **Novelty**: Is this new information or rehashing known facts?
3. **Credibility**: How trustworthy is the source?
4. **Representativeness**: Does it represent a broader trend or isolated incident?
5. **Strategic Impact**: Will this affect business decisions or operations?

What Gets Filtered Out

- Duplicate coverage of the same story
- Low-credibility sources
- Off-topic articles (even if in your date range)

- Purely tactical/technical details without strategic implications
- Opinion pieces without actionable intelligence

Troubleshooting

No articles generated?

- Verify you have articles loaded for the selected date range and topics
- Try expanding your date range (e.g., last 48 hours instead of last 24)
- Check that at least 3-4 topics are selected
- Click "Load Articles" first in Article Investigator to confirm data availability

Analysis seems generic or off-target?

- Switch to a more specific persona (CISO instead of CEO for security focus)
- Narrow your topic selection to 3-5 highly relevant categories
- Use the Config modal to customize the system prompt
- Try regenerating—AI results can vary

Generation taking too long?

- Large date ranges (7+ days) with many topics can take 60-90 seconds
- Check your internet connection
- Try reducing the number of articles (6 → 4)
- Refresh the page if it exceeds 2 minutes

Executive Actions seem too generic?

- This may indicate limited article quality or generic source material
- Use the Deep Dive tool for more specific recommendations
- Consider customizing the system prompt in Config to emphasize actionability
- Try a different persona—CTO/CISO often yield more specific actions than CEO

Scores don't make sense?

- Scores are relative to your current article set, not absolute
- A "3/5 Relevance" may still be highly relevant if few articles match
- Focus on the Strategic Relevance text, not just scores
- If consistently low scores, broaden your topic selection

Integration with Other Features

Article Investigator

- Use Article Investigator to browse all articles
- Six Articles selects the most important subset
- Return to Article Investigator for articles not included in Six Articles

Narrative Explorer

- Six Articles provides daily tactical briefing
- Narrative Explorer reveals longer-term thematic patterns
- Use both: Six Articles for "what happened today," Narratives for "what does it all mean"

Deep Analysis Tools

- Six Articles identifies what to investigate
- Deep Dive, Consensus Analysis, and other tools provide the investigation
- Workflow: Six Articles → identify critical article → Deep Dive → share findings

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Best Practices

For Daily Briefings

- Run at the same time each day (consistency builds habit)
- Export and archive for trend analysis over weeks/months
- Share with your team via Slack/email using Markdown export
- Review Selection Scores to understand what the AI prioritizes

For Executive Communication

- Use CEO persona for board/C-suite audiences
- Include Executive Takeaways in slide decks (pre-formatted for bullets)
- Export as PDF for professional presentation
- Highlight Risk vs. Opportunity assessments for prioritization discussions

For Team Collaboration

- Generate briefings with multiple personas to compare perspectives
- Use Deep Dive tools to assign follow-up research to team members
- Share Enhanced HTML export with embedded links for exploration
- Archive briefings as organizational knowledge base

Need Help?

For additional support or to report issues, contact your Aunoo AI administrator or visit the support documentation.

Last updated: 2025-11-25

Operations HQ

Getting Started with Operations HQ

Operations HQ is your system monitoring and global operations dashboard. It provides real-time system health metrics, a customizable world clock for tracking global operations, and quick access to key statistics about your intelligence database.

What's Here

System Health Status

At the top of the page, you'll see the current system status:

- **Status Badge**: Shows HEALTHY (green), DEGRADED (yellow), or CRITICAL (red)
- **Uptime**: How long the system has been running (days, hours, minutes)
- **Warnings**: Any active system warnings that need attention

World Clock

Displays current time across multiple cities for tracking global threat intel operations:

- **Default Cities**: San Francisco, New York, London, Berlin, Moscow, Dubai, Beijing, Tokyo
- **Customizable**: Click **Configure** to add/remove cities and change timezones
- **Updates**: Refreshes every second in real-time
- **Persistent**: Your configuration is saved in browser storage

To customize:

1. Click the **Configure** button
2. Add or remove cities/timezones
3. Click **Save** - your preferences are remembered

Statistics Cards

Four cards showing key database metrics (click any card to jump to that feature):

- **Total Articles**: All articles in your database → links to Database Editor
- **Articles Today**: New articles collected today → links to Keyword Alerts (Gather)
- **Keyword Groups**: Number of active keyword monitoring groups → links to Keyword Monitor
- **Topics**: Number of configured topic categories → links to Topic Management

Detailed System Metrics

Real-time resource usage broken down by category:

CPU

- **Process**: CPU used by the application
- **System**: Overall system CPU usage
- **Cores**: Number of CPU cores available
- **Load Average**: 1/5/15 minute load averages (Linux only)

Memory

- **Process RSS**: Memory used by the application
- **Process %**: Percentage of system memory used by app
- **Threads**: Number of active application threads
- **System Used**: Total system memory in use
- **System %**: Percentage of total memory used
- **Progress bar**: Visual indicator (green = healthy, yellow = warning, red = critical)

Disk

- **Used**: Disk space consumed
- **Total**: Total disk capacity
- **Free**: Available disk space
- **Progress bar**: Visual usage indicator

File Descriptors

- **Open**: Currently open file handles
- **Soft Limit**: Maximum allowed file descriptors
- **Available**: Remaining capacity
- **Connections**: Active network connections
- **Files**: Open file handles
- **Usage %**: Percentage of limit used

Progress Bar Colors:

- **Green**: < 75% usage (healthy)
- **Yellow**: 75-90% usage (warning)
- **Red**: > 90% usage (critical)

Last updated: 2025-11-25

Settings Page

Settings Overview

App Configuration

Settings → App Configuration

Manage core system settings across six tabs:

Providers

Configure news collection services (NewsAPI, TheNewsAPI, etc.) and web scraping tools (Firecrawl). Add API keys and enable/disable providers.

AI Models

Set up AI model providers (OpenAI, Anthropic, Google Gemini). Configure API keys and select which models to use for article analysis, summarization, and enrichment.

Database

View current database type (PostgreSQL or SQLite), connection status, and health metrics. Download backups (SQLite only) or view connection details (PostgreSQL).

Datasets

Manage reference datasets like media bias ratings, organization profiles, and threat actor information. Upload CSV files to update datasets or create custom ones.

Security

Configure password policies, session timeouts, and API rate limits. View security audit logs and manage access controls.

Users

Add/remove users, assign roles, and manage permissions. View user activity and last login times.

AI-Guided Topic Setup

Settings → AI-guided Topic Setup or click "Set up topic" button anywhere

A 3-step wizard that helps you configure new topic monitoring:

Step 1: API Keys (auto-skipped if already configured)

- Configure AI provider keys (OpenAI, Anthropic, Gemini)
- Configure news provider keys (NewsAPI, TheNewsAPI, etc.)
- Configure Firecrawl for web scraping

Step 2: Topic Setup

- Enter a topic name (e.g., "APT28 Campaigns")
- Provide a description of what you want to monitor
- AI suggests relevant keywords based on your topic

Step 3: Keywords

- Review AI-suggested keywords
- Add/remove/edit keywords as needed
- Keywords are used by Gather for automated collection

When to Use:

- Setting up your first topics
- Adding new threat categories to monitor
- Getting AI help with keyword brainstorming

Topic Editor

Settings → Topic Editor

Manually create and manage topics without the wizard:

- **Create Topics**: Add new categories like "Ransomware", "APT Groups", "Critical Vulnerabilities"
- **Edit Topics**: Change names, descriptions, or associated keywords
- **Delete Topics**: Remove unused topics
- **View Topics**: See all configured topics and their keyword counts

Use Topic Editor when:

- You know exactly what keywords you want (no AI help needed)
- Editing existing topics
- Reorganizing your topic structure

Quick Reference

Task	Go To
Add API keys	App Configuration → Providers or AI Models
Set up new monitoring topic (with AI help)	AI-guided Topic Setup
Set up new topic manually	Topic Editor
View database status	App Configuration → Database
Update media bias data	App Configuration → Datasets
Manage users	App Configuration → Users
Change password policy	App Configuration → Security

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Install via Docker

Docker Installation Guide

Quick Start (5 Minutes)

Get AunooAI running using the pre-built Docker Hub image.

Prerequisites

- Docker Engine 20.10+ and Docker Compose v2+
- 4GB RAM minimum (8GB recommended)
- 10GB disk space

Installation Steps

1. **Download the configuration files**

   # Create directory

   mkdir aunooai && cd aunooai

   # Download docker-compose.yml

   curl -O https://github.com/AuNooAI/AunooAI/blob/main/docker-compose.yml

   mv docker-compose.hub.yml docker-compose.yml

   # Download .env template

   curl -O https://github.com/AuNooAI/AunooAI/blob/main/.env.hub

   cp .env.hub .env

2. **Configure settings**

   nano .env

   Required changes:

   - `POSTGRES_PASSWORD`: Change from default `aunoo_secure_2025`
   - `ADMIN_PASSWORD`: Change from default `admin123`

3. **Start the application**

   docker-compose up -d

4. **Access AunooAI**

- URL: http://localhost:10001
- Username: `admin`
- Password: (what you set in `ADMIN_PASSWORD`)

5. **Configure API keys**

   - Log in to the application
   - Go to **Settings → AI-guided Topic Setup**
   - Add your API keys (OpenAI, Anthropic, NewsAPI, Firecrawl)
   - Keys are saved in a persistent Docker volume

That's it! You're now running AunooAI Community Edition.

Docker Hub Image

Image: `aunooai/aunoo-community:latest`

Pre-built images are available at:
https://hub.docker.com/repository/docker/aunooai/aunoo-community

Tags:

- `latest` - Most recent stable release (recommended)
- `v1.x.x` - Specific version tags
- `dev` - Development/testing builds (not recommended for production)

Configuration

Environment Variables

Edit `.env` to customize your deployment:

Required Settings:

Database password (CHANGE THIS!)

POSTGRES_PASSWORD=your-secure-password

Admin login password (CHANGE THIS!)

ADMIN_PASSWORD=your-admin-password

Application port

APP_PORT=10001

PostgreSQL port (change if 5432 is in use)

POSTGRES_PORT=5433

API Keys (configure via web interface after first login):

AI Providers (at least one required)

OPENAI_API_KEY=

ANTHROPIC_API_KEY=

GEMINI_API_KEY=

News Providers (at least one required)

NEWSAPI_KEY=

THENEWSAPI_KEY=

NEWSDATA_API_KEY=

Web Scraping (required)

FIRECRAWL_API_KEY=

Optional

ELEVENLABS_API_KEY= # For audio/podcast generation

Database Settings:

POSTGRES_USER=aunoo_user

POSTGRES_DB=aunoo_db

DB_POOL_SIZE=20

DB_MAX_OVERFLOW=10

Common Commands

Start/Stop Services

```
# Start all services

docker-compose up -d

# Stop all services

docker-compose down

# Restart application only

docker-compose restart aunooai

# Restart everything

docker-compose restart
```

View Logs

```
# All services

docker-compose logs -f

# Application only

docker-compose logs -f aunooai

# PostgreSQL only

docker-compose logs -f postgres

# Last 100 lines

docker-compose logs --tail=100 aunooai
```

Update to Latest Version

```
# Pull latest image

docker-compose pull aunooai

# Restart with new image

docker-compose up -d aunooai
```

Data Persistence

Docker Volumes

Your data is stored in Docker volumes:

- `postgres_data` - Database files
- `aunooai_data` - SQLite files, uploads
- `aunooai_reports` - Generated reports
- `aunooai_env` - API keys and configuration
- `aunooai_config` - Application settings

List volumes:

```
docker volume ls | grep aunooai
```

Backup Data

Backup database:

```
# Create backup file

docker-compose exec postgres pg_dump -U aunoo_user aunoo_db > aunoo_backup_$(date +%Y%m%d).sql

# Or with compression

docker-compose exec postgres pg_dump -U aunoo_user aunoo_db | gzip > aunoo_backup_$(date +%Y%m%d).sql.gz
```

Backup volumes:

```
# Backup all volumes

docker run --rm -v aunooai_data:/data -v $(pwd):/backup \

  alpine tar czf /backup/aunooai_volumes_$(date +%Y%m%d).tar.gz -C / data

# Backup specific volume

docker run --rm -v aunooai_env:/data -v $(pwd):/backup \

  alpine tar czf /backup/aunooai_env_$(date +%Y%m%d).tar.gz -C /data .
```

Restore Data

Restore database:

```
# From SQL file

docker-compose exec -T postgres psql -U aunoo_user aunoo_db < aunoo_backup.sql

# From compressed file

gunzip -c aunoo_backup.sql.gz | docker-compose exec -T postgres psql -U aunoo_user aunoo_db
```

Restore volume:

```
# Stop application first

docker-compose down aunooai

# Restore volume

docker run --rm -v aunooai_env:/data -v $(pwd):/backup \

  alpine tar xzf /backup/aunooai_env_backup.tar.gz -C /data

# Restart

docker-compose up -d
```

Troubleshooting

Application won't start

Check logs:

```
docker-compose logs aunooai
```

Common issues:

1. **Port already in use**
    - Change `APP_PORT` in `.env`
    - Change `POSTGRES_PORT` if PostgreSQL port conflicts
2. **Database connection failed**

```
# Check PostgreSQL is healthy

docker-compose ps postgres

# Wait for health check (may take 30s)

docker-compose logs postgres | grep "ready to accept connections"
```

3. **Permission errors**

```
# Fix volume permissions

docker-compose down

docker volume rm aunooai_data aunooai_reports

docker-compose up -d
```

Can't log in

Reset admin password:

```
# Stop application

docker-compose down aunooai

# Update .env with new ADMIN_PASSWORD

nano .env

# Restart

docker-compose up -d aunooai
```

Database errors

Check PostgreSQL logs:

```
docker-compose logs postgres | grep ERROR
```

Connect to database:

```
docker-compose exec postgres psql -U aunoo_user aunoo_db
```

Check connection pool:

```
# Inside PostgreSQL
```

SELECT count(*) FROM pg_stat_activity WHERE datname = 'aunoo_db';

Out of disk space

Check disk usage:

docker system df -v

Clean up:

Remove unused images

docker image prune -a

Remove unused volumes (careful!)

docker volume prune

Full cleanup (WARNING: removes all stopped containers, unused networks, etc.)

docker system prune -a

Application running slowly

Check container resources:

docker stats aunooai postgres

Increase database pool size:

Edit .env

DB_POOL_SIZE=30

DB_MAX_OVERFLOW=20

Restart

docker-compose restart aunooai

Production Deployment

Security Checklist

- ☐ Change default `POSTGRES_PASSWORD` in `.env`

- [ ] Change default `ADMIN_PASSWORD` in `.env`
- [ ] Use strong, unique passwords (20+ characters)
- [ ] Restrict port access (use firewall)
- [ ] Set up reverse proxy with HTTPS (nginx/Caddy/Traefik)
- [ ] Regular database backups (daily recommended)
- [ ] Monitor logs for errors
- [ ] Keep image updated: `docker-compose pull && docker-compose up -d`
- [ ] Limit PostgreSQL port exposure (remove from `ports:` or use firewall)

Reverse Proxy (Nginx Example)

```
server {
    listen 80;
    server_name aunoo.example.com;
    return 301 https://$server_name$request_uri;
}

server {
    listen 443 ssl http2;
    server_name aunoo.example.com;
    ssl_certificate /etc/letsencrypt/live/aunoo.example.com/fullchain.pem;
    ssl_certificate_key /etc/letsencrypt/live/aunoo.example.com/privkey.pem;
    # Security headers
    add_header Strict-Transport-Security "max-age=31536000" always;
    add_header X-Frame-Options "SAMEORIGIN" always;
    add_header X-Content-Type-Options "nosniff" always;
    # Proxy to AunooAI
    location / {
        proxy_pass http://localhost:10001;
        proxy_set_header Host $host;
```

```
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
        proxy_set_header X-Forwarded-Proto $scheme;
        # WebSocket support (if needed)
        proxy_http_version 1.1;
        proxy_set_header Upgrade $http_upgrade;
        proxy_set_header Connection "upgrade";
    }
}
```

Monitoring

Health check:

```
curl http://localhost:10001/health
```

Expected response:

```
{
  "status": "healthy",
  "uptime": {...},
  "database": "connected"
}
```

Monitor resources:

```
# Real-time stats
docker stats aunooai postgres
# Check logs for errors
docker-compose logs aunooai | grep -i error
```

Automated Backups

Add to crontab (`crontab -e`):

```
# Daily backup at 2 AM

0 2 * * * cd /path/to/aunooai && docker-compose exec -T postgres pg_dump -U aunoo_user aunoo_db | gzip > /backups/aunoo_$(date +\%Y\%m\%d).sql.gz

# Weekly volume backup (Sundays at 3 AM)

0 3 * * 0 cd /path/to/aunooai && docker run --rm -v aunooai_data:/data -v /backups:/backup alpine tar czf /backup/aunoo_volumes_$(date +\%Y\%m\%d).tar.gz -C /data .

# Cleanup old backups (keep 30 days)

0 4 * * * find /backups -name "aunoo_*.sql.gz" -mtime +30 -delete
```

Upgrading

To Latest Version

```
# Backup first!

docker-compose exec postgres pg_dump -U aunoo_user aunoo_db > backup_before_upgrade.sql

# Pull latest image

docker-compose pull aunooai

# Stop and restart with new image

docker-compose down aunooai

docker-compose up -d aunooai

# Check logs

docker-compose logs -f aunooai
```

To Specific Version

```
# Edit docker-compose.yml

nano docker-compose.yml
```

Change image line:

image: aunooai/aunoo-community:v1.2.3

Pull and restart

docker-compose pull aunooai

docker-compose up -d aunooai

Rollback

Stop application

docker-compose down aunooai

Edit docker-compose.yml to previous version

nano docker-compose.yml

Restore database if needed

docker-compose exec -T postgres psql -U aunoo_user aunoo_db < backup_before_upgrade.sql

Start with old version

docker-compose up -d aunooai

Advanced Configuration

Custom Ports

Edit `docker-compose.yml`:

services:

  aunooai:

    ports:

      - "8080:10001" # Access at localhost:8080

Multiple Instances

Run multiple AunooAI instances:

```
# Create separate directories

mkdir aunooai-prod aunooai-dev

# Copy files to each

cp docker-compose.yml aunooai-prod/

cp docker-compose.yml aunooai-dev/

# Edit .env in each with different ports

# aunooai-prod/.env: APP_PORT=10001, POSTGRES_PORT=5433

# aunooai-dev/.env: APP_PORT=10002, POSTGRES_PORT=5434

# Start each instance

cd aunooai-prod && docker-compose up -d

cd ../aunooai-dev && docker-compose up -d
```

Resource Limits

Edit `docker-compose.yml` to add resource limits:

```
services:

  aunooai:

    deploy:

      resources:

        limits:

          cpus: '2.0'

          memory: 4G

        reservations:

          cpus: '1.0'
```

memory: 2G

Getting Help

Application Issues:

- Check logs: `docker-compose logs -f aunooai`
- Health status: `curl http://localhost:10001/health`
- Getting Started Guide
- Operations HQ - System health monitoring

Docker Issues:

- System status: `docker-compose ps`
- Resource usage: `docker stats`
- Disk space: `docker system df`

Community Support:

- GitHub Issues: https://github.com/AuNooAI/AunooAI/issues
- Docker Hub: https://hub.docker.com/repository/docker/aunooai/aunoo-community

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Anticipate - Foresight Narratives

Getting Started with Anticipate

Overview

The Foresight Narratives uses AI to analyze patterns across your collected articles and project future implications. It identifies emerging trends, strategic risks, and long-term scenarios to help you stay ahead of the threat landscape.

What's Here

Five analysis dashboards, each providing a different strategic view:

Strategic Recommendations

Actionable insights organized by time horizon:

- **Near-term** (0-6 months): Immediate actions
- **Mid-term** (6-18 months): Planning and positioning
- **Long-term** (18+ months): Strategic direction

Use when: Briefing leadership, planning roadmaps, prioritizing initiatives

---

Market Signals & Strategic Risks

Identifies emerging trends and disruption scenarios:

- **Trend Analysis**: What's gaining momentum
- **Disruption Scenarios**: Potential game-changers
- **Strategic Opportunities**: Where to invest attention

Use when: Threat hunting, identifying blind spots, competitive intelligence

---

Consensus Analysis

Finds agreement and disagreement across sources:

- **Convergent Themes**: What everyone agrees on
- **Divergent Views**: Where sources conflict
- **Confidence Levels**: How certain the consensus is

Use when: Validating intelligence, identifying bias, understanding uncertainty

---

Impact Timeline

Visualizes how impacts unfold over time:

- **Key Events**: Major developments on a timeline
- **Cascading Effects**: How one event leads to another
- **Critical Paths**: Dependencies and sequences

Use when: Incident response planning, understanding attack chains, timeline analysis

---

Future Horizons

Explores long-term scenarios and possibilities:

- **Scenario Planning**: Multiple possible futures
- **Wildcards**: Low-probability, high-impact events
- **Strategic Implications**: What each scenario means

Use when: Strategic planning, war gaming, long-term forecasting

---

How to Generate Analysis

Quick Start (3 clicks)

1. **Select Topic**: Choose from dropdown (e.g., "APT Groups", "Ransomware")
2. **Select Date Range**: Last 7 days, 14 days, 30 days, or custom
3. **Click Generate**: Wait 30-90 seconds for AI analysis

That's it. Results appear in your selected tab.

Advanced Options

Click the **gear icon** to configure:

- **AI Model**: Choose which AI provider (GPT-4, Claude, etc.)
- **Organization Profile**: Tailor analysis to your industry/role
- **Article Count**: How many articles to analyze (more = longer analysis)

Saving & Loading

Save Dashboard:

1. Click **Save** icon (disk)

2. Name your dashboard
3. Add description (optional)
4. Click **Save**

Load Dashboard:

1. Click **Load** dropdown
2. Select saved dashboard
3. Instantly restore previous analysis

Delete Dashboard:

- Select from Load dropdown → Click trash icon → Confirm

Tips

Choose the Right Date Range:

- 7 days: Current events, breaking trends
- 14 days: Weekly patterns, sustained developments
- 30 days: Strategic trends, longer-term patterns
- Custom: Specific incident windows or campaigns

Use Organization Profiles:

- Creates a profile in settings for your industry
- Analysis becomes tailored to your specific context
- Recommendations align with your risk profile

Combine with Other Features:

- Use **Explore** to validate Anticipate findings
- Use **Gather** to collect articles for Anticipate
- Use **Six Articles** for tactical, Anticipate for strategic

Save Important Dashboards:

- Save weekly analyses for historical tracking
- Compare dashboards over time to see trend evolution
- Reference old analyses during retrospectives

Export for Sharing:

- Click **Download** icon for PDF/image export
- Screenshots work well for quick sharing
- Raw data available via API for custom reports

Troubleshooting

No analysis appearing:

- Verify you have articles for the selected topic (check Explore)
- Ensure date range contains articles
- Check Operations HQ for system health
- Try a different AI model if one is failing

Analysis seems generic:

- Narrow your date range (fewer, more focused articles)
- Use an organization profile for tailored insights
- Choose a more specific topic
- Increase article count in settings

Takes too long to generate:

- Large date ranges (30+ days) can take 2-3 minutes
- High article counts increase processing time
- Some AI models are slower than others
- Be patient—complex analysis takes time

Can't save dashboard:

- You may not have write permissions
- Dashboard name may conflict with existing one
- Try logging out and back in
- Check browser console for errors

Quick Reference

I want to...	**Use this dashboard...**
Brief executives	Strategic Recommendations
Find emerging threats	Market Signals & Strategic Risks
Validate intelligence	Consensus Analysis
Understand attack timelines	Impact Timeline
Plan long-term strategy	Future Horizons

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Model Bias Arena

Model Bias Arena

Overview

Model Bias Arena is a comparative testing environment that evaluates and compares AI models for bias across multiple dimensions. Test how different AI providers (OpenAI, Anthropic, Google) interpret and analyze the same threat intelligence content.

Location: Analyze → Model Bias Arena

Why Use It?

- **Model Selection**: Compare which AI model best fits your analysis needs
- **Bias Detection**: Identify systematic biases in AI-generated analysis
- **Quality Assurance**: Validate that AI outputs are consistent and reliable
- **Vendor Evaluation**: Make data-driven decisions about AI provider contracts

---

How It Works

The arena runs the same articles through multiple AI models and compares:

- **Summary Quality**: How well each model captures key points
- **Tone and Sentiment**: How each model interprets article sentiment
- **Factual Accuracy**: Consistency with source material
- **Political Bias**: Whether models inject political framing
- **Length and Detail**: Verbosity vs. conciseness
- **Entity Extraction**: Accuracy in identifying organizations, people, CVEs

---

Quick Start

Step 1: Create New Evaluation

1. Click **New Evaluation** button
2. Enter evaluation name (e.g., "AI News Bias Test - January 2025")
3. Add optional description
4. Click **Create**

Step 2: Select Articles

Choose articles to test:

- **Topic Filter**: Select specific topics (e.g., "Ransomware", "APT Groups")
- **Date Range**: Choose time period
- **Article Count**: 5-20 articles recommended
- **Random Sample**: Check to get representative sample

Step 3: Select Models

Choose which AI models to compare:

- **OpenAI**: GPT-4, GPT-4-turbo, GPT-3.5-turbo
- **Anthropic**: Claude 3 Opus, Claude 3 Sonnet, Claude 3 Haiku
- **Google**: Gemini Pro, Gemini 1.5

Tip: Start with 2-3 models for faster results.

Step 4: Configure Analysis

- **Summary Length**: 40-100 words
- **Analysis Depth**: Quick scan vs. deep analysis
- **Prompt Template**: Use default or customize

Step 5: Run Evaluation

Click **Start Evaluation** and wait:

- Small evaluations (5 articles, 2 models): 2-5 minutes
- Large evaluations (20 articles, 5 models): 10-20 minutes

Understanding Results

Overview Dashboard

Top-level metrics:

- **Model Rankings**: Overall performance scores
- **Bias Scores**: Average political bias detected
- **Consistency Scores**: Agreement between models
- **Quality Metrics**: Summary quality, accuracy, completeness

Article-by-Article Comparison

For each article:

- **Side-by-Side Summaries**: Compare outputs from each model
- **Sentiment Analysis**: How each model rates sentiment
- **Entity Extraction**: Which entities each model identified
- **Bias Detection**: Political framing differences
- **Factual Consistency**: Agreement with source material

Visualization Charts

- **Bias Scatter Plot**: Political bias vs. factual accuracy
- **Quality Heatmap**: Model performance across articles
- **Consistency Matrix**: Agreement between model pairs
- **Entity Comparison**: Entity extraction accuracy

Exporting Results

Export Options:

- **PDF Report**: Executive summary with charts
- **CSV Data**: Raw scores for statistical analysis
- **JSON**: Complete data dump for programmatic use
- **Markdown**: Documentation-friendly format

Troubleshooting

Evaluation taking too long

- Reduce article count (try 5 articles first)
- Fewer models (2-3 instead of 5+)
- Check API rate limits

No results appearing

- Verify API keys are configured
- Check article selection criteria (did you get 0 articles?)
- Look at browser console for errors

Inconsistent results

- AI models are non-deterministic (slight variation is normal)
- Run multiple evaluations and average results
- Use higher article counts for statistical significance

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Exploratory Analysis

Exploratory Analytics

Overview

Exploratory Analytics provides interactive data visualization and statistical analysis of your intelligence database. Discover patterns, trends, and anomalies that aren't obvious from reading individual articles.

Location: Settings → Analytics (or Analyze → Data Insights)

What's Included

Temporal Analysis

- **Articles Over Time**: Line charts showing collection volume
- **Trend Detection**: Identify spikes or declines in coverage
- **Seasonality**: Spot recurring patterns
- **Time-of-Day**: When articles are published

Topic Distribution

- **Pie Charts**: Breakdown by topic category
- **Bar Charts**: Compare topic volumes
- **Topic Evolution**: How topics change over time
- **Topic Correlation**: Which topics appear together

Source Analysis

- **Top Publishers**: Most prolific sources
- **Media Bias Distribution**: Left/center/right breakdown
- **Credibility Scores**: High vs. low credibility sources
- **Geographic Distribution**: Articles by country

Sentiment Analysis

- **Overall Sentiment**: Positive/negative/neutral breakdown
- **Sentiment by Topic**: Do some topics skew negative?
- **Sentiment Over Time**: Is coverage becoming more alarming?
- **Sentiment vs. Source Bias**: Correlation analysis

Entity Analysis

- **Top Entities**: Most-mentioned organizations, people, CVEs
- **Entity Co-occurrence**: Which entities appear together

- **Entity Timeline**: When entities are mentioned
- **Entity Sentiment**: How entities are portrayed

Advanced Visualizations

- **Heatmaps**: Topic × Sentiment × Time
- **Scatter Plots**: Bias vs. Credibility
- **Radar Charts**: Multi-dimensional analysis
- **Network Graphs**: Entity relationships

Quick Start

Step 1: Select Data

Filter your analysis:

- **Date Range**: Last 7 days, 30 days, custom range
- **Topics**: Select one or more topics (or all)
- **Sources**: Include/exclude specific publishers
- **Sentiments**: Filter by positive/negative/neutral

Step 2: Choose Visualization

Pick from available charts:

- **Quick Stats**: Overview cards (total articles, top topic, etc.)
- **Distribution Charts**: Pie/bar charts for categorical data
- **Temporal Charts**: Line charts for trends over time
- **Heatmaps**: Multi-dimensional data
- **Custom**: Build your own visualization

Step 3: Explore & Drill Down

Interactive features:

- **Click charts**: Filter to specific data points
- **Hover**: See detailed tooltips
- **Zoom**: Temporal charts support zooming
- **Export**: Save charts as PNG/PDF

Available Visualizations

Quick Stats Cards

Top-level metrics displayed as cards:

- **Total Articles**: Count in selected date range
- **Top Topic**: Most frequent category
- **Top Sentiment**: Most common sentiment
- **Average Articles/Day**: Collection rate
- **Top Source**: Most prolific publisher

Distribution Charts

Topic Distribution (Pie/Bar)

- Shows breakdown by topic category
- Click slice/bar to filter to that topic
- Hover for exact counts and percentages

Sentiment Distribution (Pie/Bar)

- Positive/Negative/Neutral breakdown
- Color-coded (green/red/gray)
- Compare sentiment across topics

Source Bias Distribution

- Left/Left-Center/Center/Right-Center/Right
- Based on Media Bias Fact Check data
- Helps identify coverage balance

Credibility Distribution

- Very High/High/Mixed/Low/Very Low
- Based on source ratings
- Quality control metric

Temporal Charts

Articles Over Time (Line)

- Daily article counts
- Zoom to specific date range
- Identify spikes and gaps
- Click point to see articles from that day

Sentiment Over Time (Line)

- Track sentiment trends
- Multiple lines (Positive/Negative/Neutral)
- See if coverage is becoming more negative

Topic Trends (Multi-line)

- Compare multiple topics over time
- Identify which topics are growing/declining
- Useful for strategic planning

Heatmaps

Sentiment × Topic Heatmap

- Rows: Topics, Columns: Sentiments
- Color intensity shows article count
- Identify which topics are most negative/positive

Topic × Time Heatmap

- Rows: Topics, Columns: Days/Weeks
- See topic activity patterns over time
- Spot emerging threats early

Advanced Charts

Bias vs. Credibility Scatter

- X-axis: Political bias (left to right)
- Y-axis: Credibility score
- Each point is an article
- Identify low-credibility biased sources

Entity Network Graph

- Nodes: Entities (orgs, people, CVEs)
- Edges: Co-occurrence in articles
- Size: Frequency of mention
- Reveals connections between entities

Radar Chart

- Multi-dimensional comparison
- Topics, sentiments, sources
- Good for presentations

Exporting Data

Export Options:

- **PNG/PDF**: Charts for presentations
- **CSV**: Raw data for Excel/R/Python analysis
- **JSON**: Complete data structure
- **Markdown Table**: For documentation

How to Export:

1. Generate your visualization
2. Click **Export** button (top-right)
3. Select format
4. Choose location to save

Combining with Other Features

Research Workflow

1. **Exploratory Analytics** → Identify interesting patterns
2. **Article Investigator** → Drill into specific articles
3. **Narrative Explorer** → AI analysis of patterns
4. **Six Articles** → Executive summary

Monthly Reporting

1. **Exploratory Analytics** → Generate trend charts
2. Export charts as PNG
3. Add to monthly report template
4. Include commentary on notable trends

Quality Control

1. **Source Analysis** → Check bias distribution
2. **Credibility Charts** → Ensure high-quality sources
3. **Collection Volume** → Verify consistent collection
4. Alert on anomalies

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