

Momen Ayman Mohammed

15 May City - Cairo | (+2) 01016432911 | momen.saif959@gmail.com | [GitHub](#) | [LinkedIn](#)

CAREER OBJECTIVE

Quick-learning Backend Developer with solid grounding in Python, machine learning, and problem solving. Seeking to leverage hands-on experience in data preprocessing, feature engineering, predictive modeling, and full-stack deployment to deliver actionable insights and support data-driven decision-making.

EDUCATION

El Sewedy Polytechnic University, 10th of Ramadan City

Oct 2024 – Now

Bachelor of Technology – Major: Computer Science Technology

HST School For Applied Technology, Nasr City

Oct 2021 – June 2024

Technical Diploma – Graduated with an excellent grade of 98%

EXPERIENCE

Internship Experience:

Backend Developer Intern – ThinkStudio:

July 2025 – August 2025

- Developed a basic RAG (Retrieval-Augmented Generation) system using FastAPI, Pydantic, MongoDB, and Qdrant vector database.
- Implemented file ingestion into the database and enabled LLM-based retrieval to answer user queries.
- Integrated JWT authentication for secure access and implemented APIs for database and LLM interactions.

Database Engineer – ZKTeco: June 2024 – August 2024

- Designed and implemented a relational database schema to manage parking slots, vehicles, users, and access logs, ensuring efficient data organization and retrieval.
- Developed SQL scripts to create tables and basic stored procedures for handling parking slot status updates and user information.
- Assisted in troubleshooting and resolving issues related to database connectivity and data integrity during the testing phase.

PROJECTS

[SmSm Academy](#) Registration System (Node.js, Python/MongoDB, Docker, Nginx)

Role: Backend And Deployment Engineer

- Orchestrated a containerized environment using Docker Compose, separating the API, Client, and Database layers for improved maintainability and security.
- Developed and maintained custom Bash deployment scripts to automate CI/CD processes, reducing manual deployment time by 80%.
- Configured and optimized an Nginx Reverse Proxy on a Linux VPS to handle secure HTTPS traffic.
- Implemented environment-variable-driven configurations to secure sensitive database credentials and API keys across development and production environments.

RAG Backend System (Python, FastAPI, MongoDB, Qdrant)

- Designed backend for storing files in MongoDB and retrieving relevant information using a vector database (Qdrant).
- Built endpoints for user authentication (JWT) and LLM-powered query handling.
- Ensured efficient data retrieval, security, and scalability.
- Implemented a Semantic Search System for uploaded documents

Vocab-Validator & Curriculum Scraper (Python, Streamlit, BeautifulSoup4, Google Docs API)

- Developed a high-performance automation tool to validate educational vocabulary against CEFR levels (A1–C2) by scraping real-time data from the Cambridge Dictionary, increasing work efficiency by 80%.
- Engineered a multi-threaded scraping engine using ThreadPoolExecutor, significantly reducing processing time for large word lists.
- Integrated Google Docs API and local .docx parsing to automatically detect duplicate vocabulary across existing curriculum files.

- Implemented a custom rule-based lemmatization algorithm to handle English inflections and ensure accurate dictionary hits.
- Designed a custom clipboard-to-HTML bridge allowing users to copy styled tables directly into Microsoft Word/Google Docs with zero formatting loss.

Spam Email Classifier (Python, scikit-learn)

- Assembled and preprocessed an email dataset: tokenization, stop-word removal, and TF-IDF vectorization for robust feature extraction.
- Trained and compared Logistic Regression and SVM models using scikit-learn to classify emails as spam or not.
- Evaluated model performance using standard metrics and confusion matrix, and documented feature importance to understand key indicators of spam.

VOLUNTEERING EXPERIENCE

Research Team Leader and Team Administration:

One Team: *Feb 2025 – Now*

- Demonstrated significant dedication and cooperation with the team.
- Responsible for managing, developing, and teaching a team of young researchers the basics of research.
- Sharing opportunities in the research field to help push the team further.

56th Cairo International Bookfair Organizer:

Jan 2025 – Feb 2025

- Volunteered as an organizer, helping manage and reduce crowding and conflict within the halls, and overseeing entry of guests at the gates.
- Monitored specific aisles and sections, reducing crowding and guiding lost guests to their needed places.

Registration and Workshop Organizer:

ACTS' Sustainable Summit: *Nov 2024*

- Volunteered as part of the registration and workshop teams.
- Tracked workshop agendas, ensured speakers started and ended on time, and maintained order in the workshop room.
- Assured the functionality of every device used in the lectures.

55th Cairo International Bookfair Organizer:

Jan 2024 – Feb 2024

COURSES

DECI Scholarship by the Ministry of Telecommunication

- Learned Python fundamentals and worked on a graduation project.
- Learned Data Analysis Fundamentals.
- Learned Cyber Security Fundamentals.

IBM SkillsBuild Project Management Fundamentals Course

- Learned Project Management Techniques (Agile & Waterfall).
- Worked on real project examples using project charters and Gantt charts.
- Practiced communication management and work breakdown structures.

SKILLS

Language Skills:

- English: (B2)
- German: (A2)

Technical Skills:

Node.js | Python (FastAPI) | RESTful APIs | Docker & Docker Compose | Nginx Reverse Proxy | Linux VPS Management | Java Backend | Object Oriented Programming | GitHub | MySQL Workbench | Microsoft SQL Server | MongoDB | Vector Databases | Geographic Mapping | Database Design | Database Integration | Researching | Project Handling | Multi-threading | Web Scraping (BeautifulSoup4) | NLP / Lemmatization | Google Docs API

Personal Skills:

Problem Solving | Multitasking | Ability to Work in a Team | Critical and Analytical Thinking | Task Management | Sociable and Flexible | Project Management | Team Leadership