

The GPT Portfolio White Paper

The GPT Portfolio follows an investment strategy that harnesses ChatGPT's and other Large Language Models' (LLMs) analytical capabilities. By leveraging the latest advancements in artificial intelligence, the system provides systematically curated stock and sector selections. One of its standout features is using LLMs to derive investment scores that guide portfolio decisions.

Core Investment Rules

The portfolio uses a structured investment approach:

- Composition: 15 individual assets selected by ChatGPT per the analysis process discussed below
 - 10 individual stocks
 - 5 sector-specific ETFs
- Holding Period: All assets are held for one month
- Monthly Rebalancing: At month-end, the system conducts a complete analysis to select the top 15 assets and rebalances accordingly

AI-Powered Analysis System

A key distinction of our system is its method of keeping ChatGPT current with market conditions. Since these models don't have real-time market knowledge, we provide them with the latest information through a systematic process:

The analysis integrates multiple data streams:

1. Economic Context
 - Comprehensive AI-generated economic reports using the latest information about current market conditions and global events
2. Sector-Specific Analysis
 - Industry trends and developments
 - Sector-specific economic indicators

- AI-based competitive landscape analysis
- 3. Company-Level Information
 - Financial ratios and metrics
 - Recent price movements and technical indicators
 - Current news and announcements

Scoring Methodology

The system employs carefully crafted prompts to ensure consistent and meaningful analysis. The prompts used to generate analyses of certain sectors and individual companies are disclosed in Exhibit 1.

Portfolio Construction Process

The system follows a systematic monthly process:

1. Macro Analysis
 - Collection of economic indicators and trends
 - Analysis of significant global events
 - Generation of a comprehensive economic report
2. Sector Evaluation
 - Processing of sector-specific information
 - AI-driven scoring of each sector using macro and sector information
 - Selection of top 5 sectors for ETF investment
 - Once the top 5 ETF sectors are published, each sector is prompted again into ChatGPT, asking it to identify which specific ETF should be selected for said sector
3. Individual Stock Selection
 - Analysis of S&P 500 companies
 - Integration of company-specific news and data
 - AI scores using firm-specific, sector, and macro information
 - Selection of top 10 companies based on the scores
 - If a tie in the score occurs, the company with the larger market cap is chosen
4. Portfolio Balance

- 67% allocation to individual stocks
- 33% allocation to sector ETFs
- Monthly rebalancing to maintain target allocations

Risk Management

The system incorporates several risk management features:

- Diversification across multiple sectors and companies
- Regular monthly rebalancing
- Systematic scoring process
- Multiple data sources

Conclusions

The GPT Portfolio represents a shift in investment management, placing AI at the core of the investment process. Through its analysis and the unparalleled capabilities of LLMs, it offers a systematic approach to navigating market complexities. While all investing carries inherent risks, the GPT Portfolio leverages cutting-edge technology to provide a disciplined, data-driven investment approach.

The system's success relies on three key elements:

1. Systematic data collection and processing
2. Sophisticated AI analysis through structured prompts
3. Disciplined portfolio construction and rebalancing

This combination of technological innovation and investment discipline creates a unique approach to portfolio management that aims to capitalize on the analytical power of AI while maintaining rigorous investment principles.

Exhibit 1 - Prompts

Sector prompt:

```
"Pretend you are a financial expert with stock recommendation
experience.\n"

"Speak in the third person."

"Ydou do not mention your credentials.\n"

f"Macro-economic data for context:\n{macro_state}\n"

f"Today is {today}.\n"

"Based on the provided financial data and news,"

f" please assign a score (from 1 to 100) reflecting the potential
investment value of the sector.\n"

"First, write a report based on the news about the economic outlook
of the sector.\n"

"Split the report into recent news, economic outlook, political
challenges, and recent technology developments, if any.\n"

"Then, in a new line, output Score: X.\n"

"Do not recommend alternatives.\n"

"Do not mention the word 'provided' instead use 'recent' or
'latest'."

"Do not speak directly to investors nor recommend actions.\n"
```

```
"Start with 'Sector Investment Report:'\n"

"Finally, in a new line, output Score: X."
```

Firm prompt:

```
"Pretend you are a financial expert with stock recommendation
experience.\n"

"Speak in the third person."

"You do not mention your credentials.\n"

f"Macro-economic data for context:\n{macro_news}\n"

"Based on the provided financial data and news headlines,"

" please assign a score (from 1 to 100) reflecting the potential
investment value of"

f" company {company_name} in the {industry} industry for the next
month.\n"

"First, write a short investment report about the firm
situation.\n"

"Include sections of recent news, financials, valuations, and
economic outlook affecting the firm.\n"

"Do not recommend alternatives.\n"

"Do not mention the word 'provided' instead use 'recent' or
'latest'."

"Do not speak directly to investors nor recommend actions.\n"

"Start with 'Investment Report:'\n"
```

```
"Finally, in a new line, output Score: X."
```

Exhibit 2 - Data sources

1. Wikipedia
 2. <https://stocknewsapi.com/>
 3. <https://finance.yahoo.com/>
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Exhibit 2A

For each firm, the news inputs are all past week's news headlines with summaries from the following news outlets:

1. 24/7 Wall Street
2. Accesswire
3. After Earnings (video)
4. Barrons
5. Benzinga
6. Bloomberg Markets and Finance (video)
7. Bloomberg Technology (video)
8. Business Insider
9. Business Wire
10. CNBC
11. CNBC International TV
12. CNBC Television
13. CNET
14. CNN
15. CNN Business

- 16.Cheddar Videos
- 17.Deadline
- 18.Digital Trends (video)
- 19.Discount The Obvious
- 20.ETF Trends
- 21.ETF.com
- 22.Engadget (video)
- 23.Fast Company
- 24.Finbold
- 25.Forbes
- 26.Fox Business
- 27.FreightWaves
- 28.FXEmpire
- 29.GeekWire
- 30.Globe News Wire
- 31.Green Stock News (video)
- 32.GuruFocus
- 33.Huffington Post
- 34.InsiderTrades
- 35.Investopedia
- 36.Investor Place
- 37.Investors Business Daily
- 38.Invezz
- 39.Kiplinger
- 40.Kitco
- 41.Marijuana Stocks
- 42.Market Watch
- 43.Mcap MediaWire
- 44.Millennial Money
- 45.Morningstar Inc.
- 46.New York Times
- 47.New York Post
- 48.Newsfile Corp
- 49.MarketBeat
- 50.MCAP MediaWire

51. Penny Stocks
 52. Proactive Investors
 53. PYMNTS.com
 54. PR Newswire
 55. Pulse2
 56. Reuters
 57. Schaeffers Research
 58. Schwab Network (video)
 59. See It Market
 60. Seeking Alpha
 61. Skynews
 62. Stock Market.com
 63. TechCrunch
 64. TechXplore
 65. The Dog of Wall Street
 66. The Financial News
 67. The Guardian
 68. The Motley Fool
 69. The Street (video)
 70. The Verge (video)
 71. VentureBeat
 72. Wall Street Journal (articles)
 73. Wall Street Journal (video)
 74. Yahoo Finance (video)
 75. Zacks Investment Research
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Exhibit 2B

For firms financials, we use the most recent available information about these variables:

1. Previous Close Price
2. Opening Price
3. Lowest Price of the Day

4. Highest Price of the Day
5. Previous Close Price (Regular Market)
6. Opening Price (Regular Market)
7. Lowest Price of the Day (Regular Market)
8. Highest Price of the Day (Regular Market)
9. Annual Dividend Rate
- 10.Dividend Yield
- 11.Payout Ratio (Dividend Payout as Percentage of Earnings)
- 12.Five-Year Average Dividend Yield
- 13.Beta (Volatility Measure)
- 14.Price-to-Earnings Ratio (Trailing 12 Months)
- 15.Price-to-Earnings Ratio (Forward 12 Months)
- 16.Daily Volume of Shares Traded
- 17.Daily Volume of Shares Traded (Regular Market)
- 18.Average Volume of Shares Traded
- 19.Average Volume of Shares Traded (Last 10 Days)
- 20.Average Daily Volume of Shares Traded (Last 10 Days)
- 21.Bid Price
- 22.Ask Price
- 23.Bid Size (Number of Shares)
- 24.Ask Size (Number of Shares)
- 25.Market Capitalization
- 26.52-Week Low Price
- 27.52-Week High Price
- 28.Price-to-Sales Ratio (Trailing 12 Months)
- 29.50-Day Moving Average Price
- 30.200-Day Moving Average Price
- 31.Annual Dividend Rate (Trailing 12 Months)
- 32.Dividend Yield (Trailing 12 Months)
- 33.Trading Currency
- 34.Enterprise Value
- 35.Profit Margins
- 36.Float Shares (Shares Available to Public)
- 37.Shares Outstanding
- 38.Shares Sold Short

39. Shares Sold Short in the Previous Month
40. Short Interest Date of Previous Month
41. Most Recent Short Interest Date
42. Short Interest as Percentage of Outstanding Shares
43. Insider Holdings Percentage
44. Institutional Holdings Percentage
45. Short Ratio (Days to Cover Short Positions)
46. Short Interest as Percentage of Float
47. Implied Shares Outstanding
48. Book Value per Share
49. Price-to-Book Ratio
50. Last Fiscal Year End Date
51. Next Fiscal Year End Date
52. Most Recent Quarter Date
53. Earnings Growth (Quarterly)
54. Net Income to Common Stockholders
55. Earnings per Share (Trailing 12 Months)
56. Earnings per Share (Forward 12 Months)
57. Price/Earnings to Growth (PEG) Ratio
58. Last Stock Split Factor
59. Last Stock Split Date
60. Enterprise Value to Revenue Ratio
61. Enterprise Value to EBITDA Ratio
62. 52-Week Price Change Percentage
63. S&P 500 52-Week Price Change Percentage
64. Last Dividend Value
65. Last Dividend Payment Date
66. Highest Target Price (Analyst Forecast)
67. Lowest Target Price (Analyst Forecast)
68. Mean Target Price (Analyst Forecast)
69. Median Target Price (Analyst Forecast)
70. Recommendation Mean (Analyst Consensus)
71. Recommendation Key (Analyst Rating)
72. Number of Analyst Opinions
73. Total Cash

- 74.Cash per Share
 - 75.EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization)
 - 76.Total Debt
 - 77.Quick Ratio (Liquidity Measure)
 - 78.Current Ratio (Liquidity Measure)
 - 79.Total Revenue
 - 80.Debt-to-Equity Ratio
 - 81.Revenue per Share
 - 82.Return on Assets (ROA)
 - 83.Return on Equity (ROE)
 - 84.Free Cash Flow
 - 85.Operating Cash Flow
 - 86.Earnings Growth Rate
 - 87.Revenue Growth Rate
 - 88.Gross Profit Margins
 - 89.EBITDA Margins
 - 90.Operating Margins
 - 91.Financial Currency
 - 92.Price/Earnings to Growth (PEG) Ratio (Trailing)
 - 93.Audit Risk Level
 - 94.Board Risk Level
 - 95.Compensation Risk Level
 - 96.Shareholder Rights Risk Level
 - 97.Overall Risk Level
-

Exhibit 2C

For the macro news, we use the past week's news about general markets from the same sources as in Exhibit 2A. Additionally, we include current events from <https://en.wikipedia.org/wiki/2024>, https://en.wikipedia.org/wiki/2024_in_the_United_States

Exhibit 3

Specific ETF prompt



Exhibit 4

[File of trades](#)

Grok Test

```
system_prompt = (  
  
    """You're Grok, the AI investor with an eye for the stars and feet  
    planted firmly in spreadsheets. You're all about sniffing out the next big  
    thing in tech, especially AI and climate solutions, but you don't just  
    jump in - you do the math first.  
  
    Your optimism is tempered by wit; you see growth where others see  
    risk, but you're not one to chase shiny objects without due diligence.  
    You're a master of the long game, betting on trends before they're cool,  
    yet your contrarian streak only kicks in with solid data to back it up.  
  
    Every investment is a learning opportunity, and you're keen on  
    supporting companies that not only promise returns but also contribute  
    positively to the universe. Your investment strategy? A cocktail of  
    growth-chasing with a splash of value investing, always ready to pivot as  
    the market dances.  
  
    Bottom line: You're the investor who marries innovation with risk  
    management, diving deep into numbers and adapting as the cosmos of the  
    market evolves.  
  
    Macro-economic context:  
  
    {macro_news}  
  
    Based on the provided financial data and news headlines, assign a  
    score (1-100) for the investment potential of {company_name} in the  
    {industry} industry for the next month.
```

Write a brief Grok-style investment report covering:

- Recent news analysis
- Financial metrics evaluation
- Valuation assessment
- Economic impact on the firm

A Grok-style investment report combines deep financial analysis with a humorous perspective, providing insights into human economics from a grand perspective.

Do not recommend alternatives or speak directly to investors.

Start with 'Investment Report:'

End with 'Score: X' on a new line."""

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