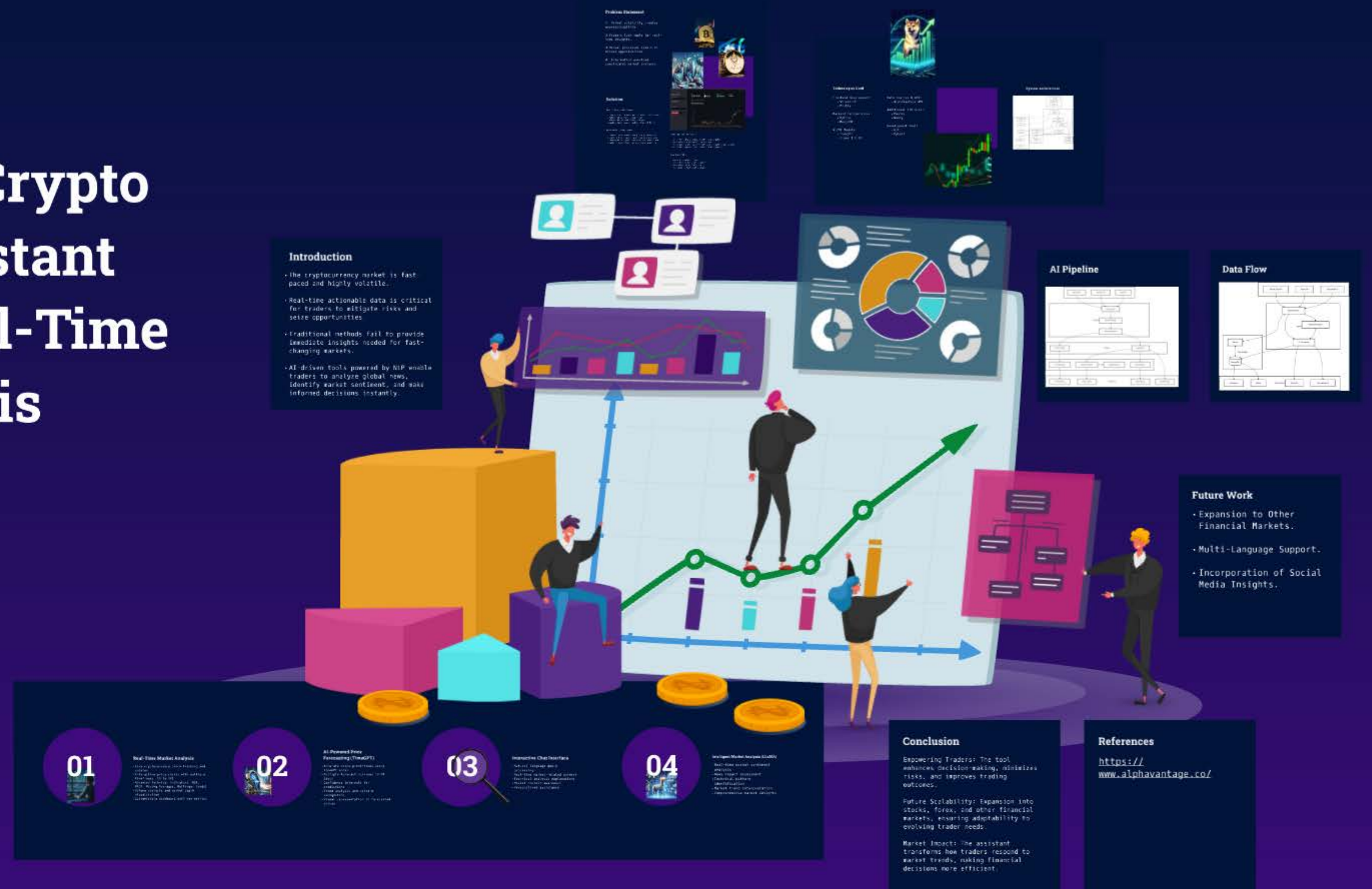


AI-Powered Crypto Trading Assistant Based on Real-Time News Analysis

Team: The Extractors

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Introduction

- The cryptocurrency market is fast-paced and highly volatile.
- Real-time actionable data is critical for traders to mitigate risks and seize opportunities.
- Traditional methods fail to provide immediate insights needed for fast-changing markets.
- AI-driven tools powered by NLP enable traders to analyze global news, identify market sentiment, and make informed decisions instantly.



Problem Statement

1. Market volatility creates unpredictability
2. Traders lack tools for real-time insights.
3. Manual processes result in missed opportunities.
4. Information overload complicates market analysis.



Solution

Real-Time Market Analysis

- Live price tracking and technical indicators
- Automated pattern recognition
- Volume and market depth analysis
- Custom timeframe selection from 1D to 1Y

AI-Powered Intelligence

- TimeGPT forecasting for price predictions
- LLaMA 3.2 for market analysis and insights
- Sentiment analysis from news and market data
- Pattern identification and trend analysis



Interactive Features

- User-friendly dashboard with live updates
- Customizable technical indicators
- Interactive charts with multiple visualization options
- Natural language chat interface for queries

Key Benefits

- Reduced analysis time
- Data-driven decision support
- Consolidated market view
- Accessible technical analysis

01



Real-Time Market Analysis

- Live cryptocurrency price tracking and updates
- Interactive price charts with multiple timeframes (1D to 1Y)
- Advanced technical indicators (RSI, MACD, Moving Averages, Bollinger Bands)
- Volume analysis and market depth visualization
- Customizable dashboard with key metrics

02



AI-Powered Price Forecasting (TimeGPT)

- Accurate price predictions using TimeGPT model
- Multiple forecast horizons (7-90 days)
- Confidence intervals for predictions
- Trend analysis and pattern recognition
- Visual representation of forecasted prices



03

Interactive Chat Interface

- Natural language query processing
- Real-time market-related answers
- Technical analysis explanations
- Market context awareness
- Personalized assistance

04



Intelligent Market Analysis (LLaMA)

- Real-time market sentiment analysis
- News impact assessment
- Technical pattern identification
- Market trend interpretation.
- Comprehensive market insights

Technologies Used

Frontend Development:

- Streamlit
- Plotly

Backend Technologies:

- Python
- MongoDB

AI/ML Models:

- TimeGPT
- Llama 3.2 3B

Data Sources & API:

- AlphaVantage API

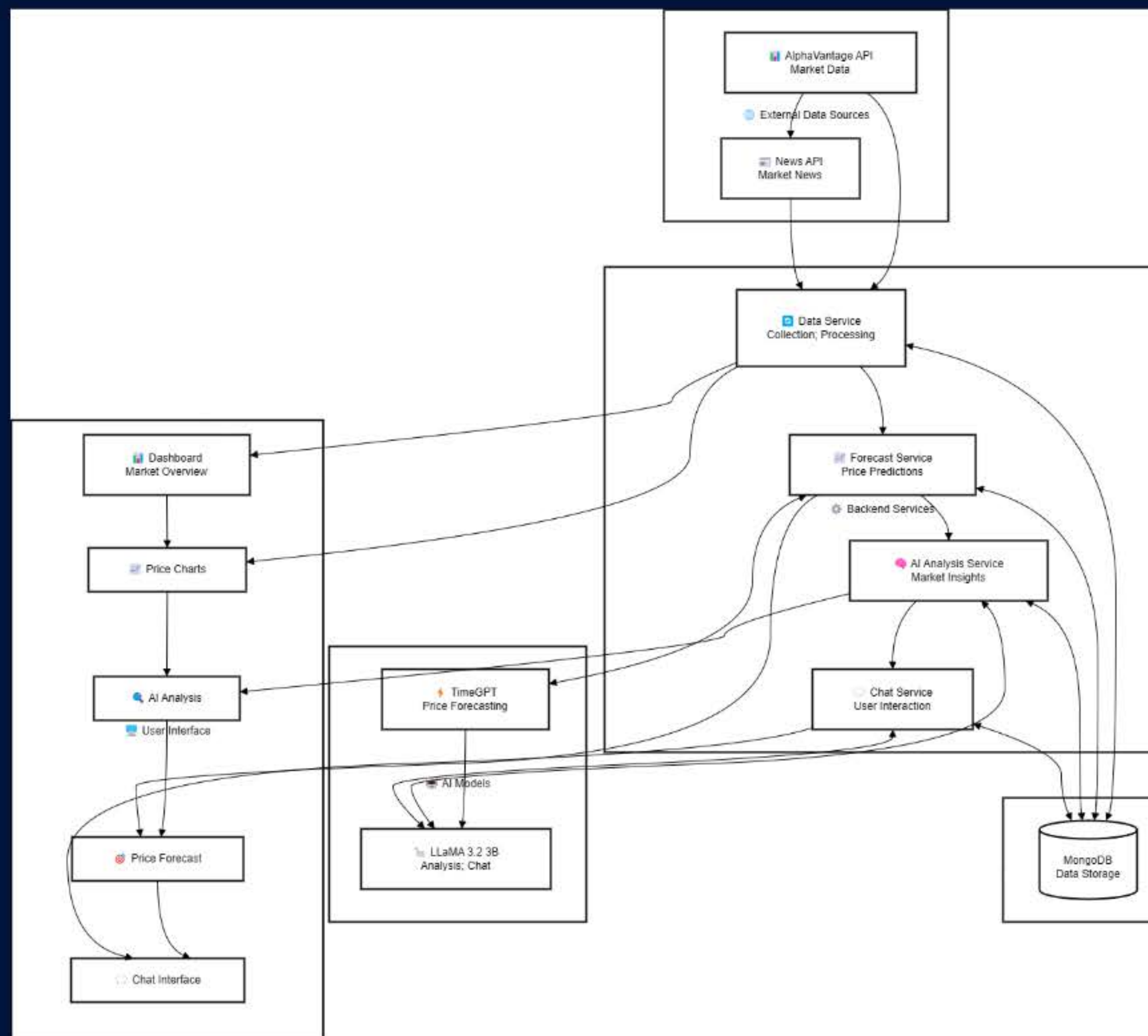
Additional Libraries:

- Pandas
- NumPy

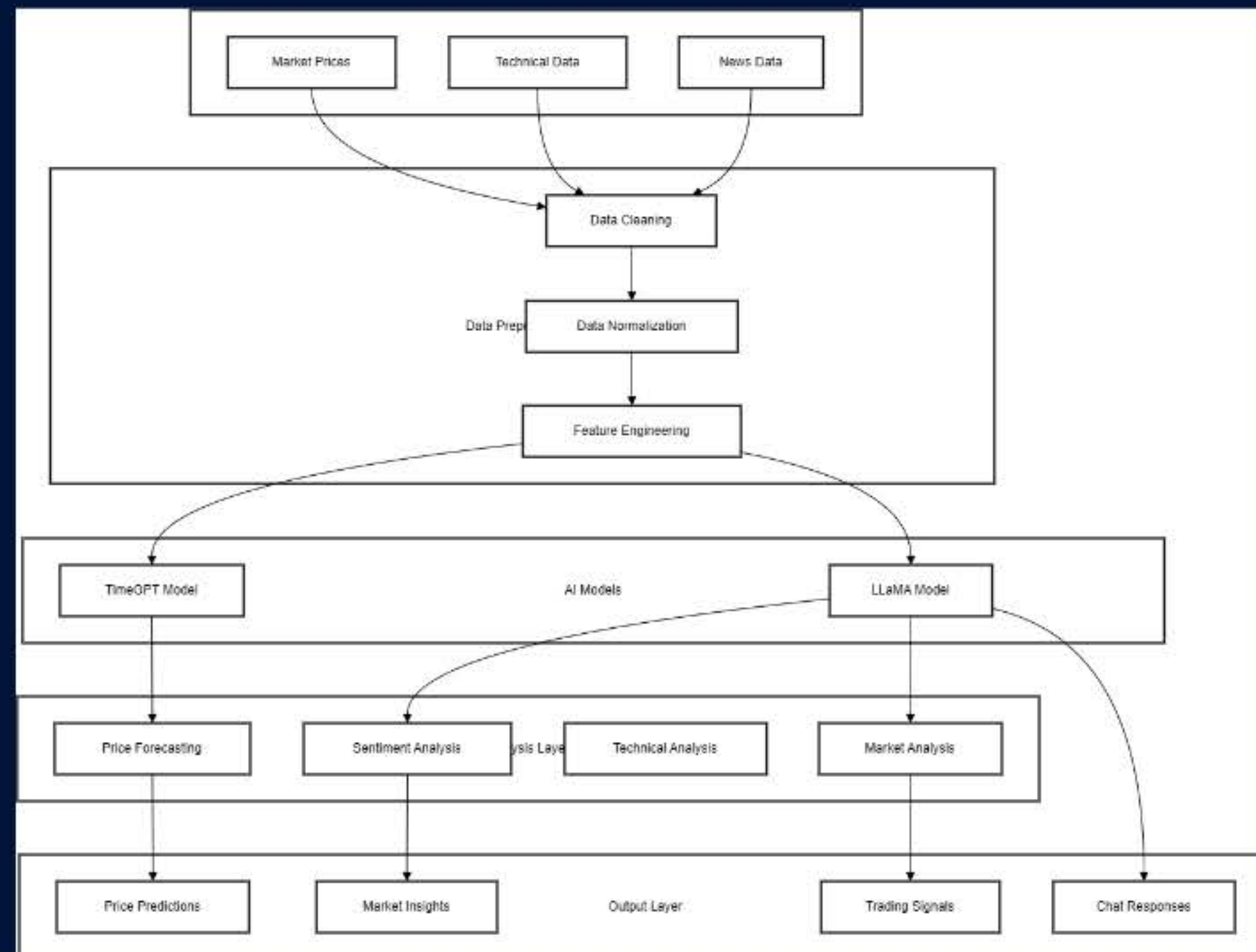
Development Tools

- Git
- Pytest

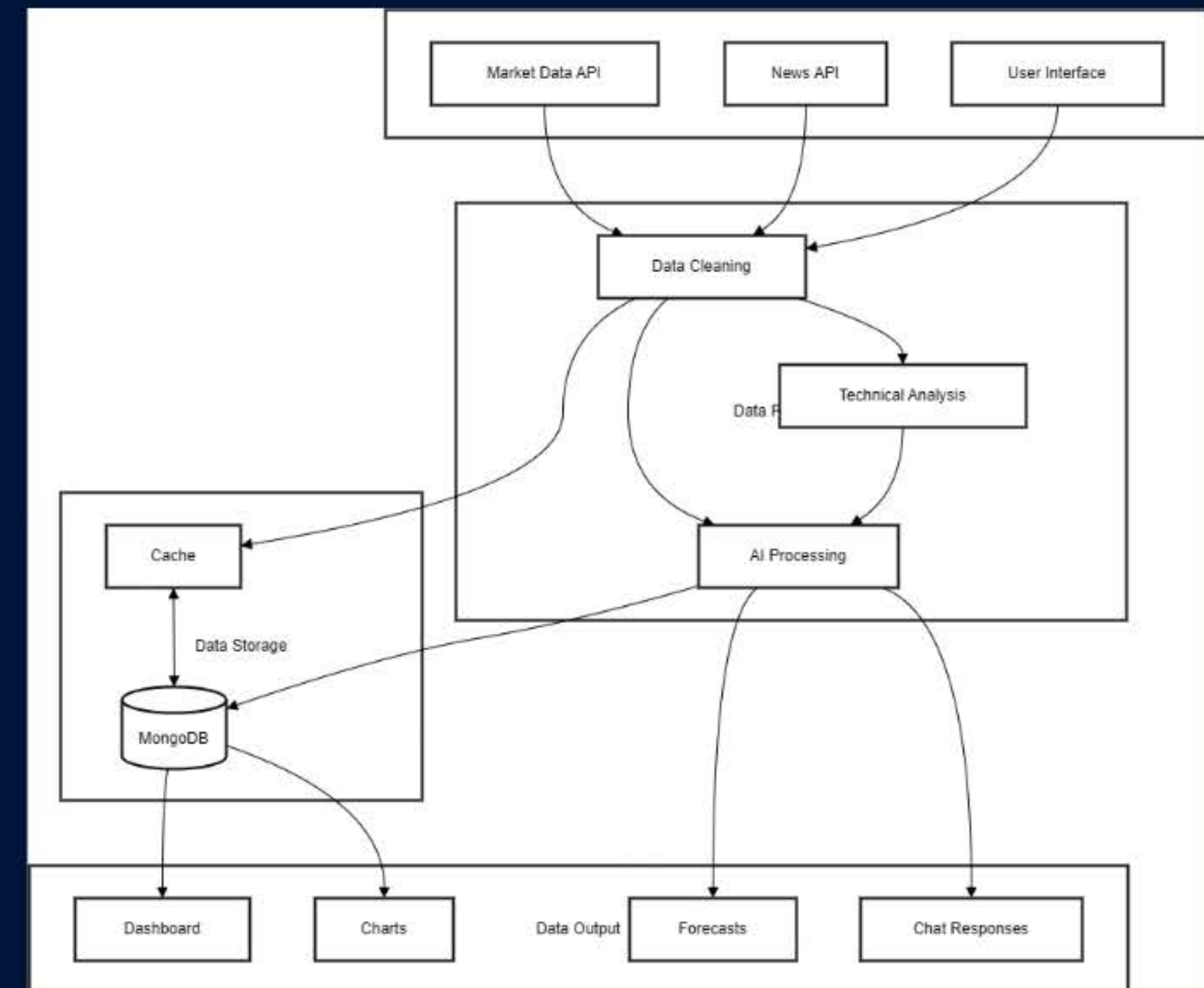
System Architecture



AI Pipeline



Data Flow



Future Work

- Expansion to Other Financial Markets.
- Multi-Language Support.
- Incorporation of Social Media Insights.



Conclusion

Empowering Traders: The tool enhances decision-making, minimizes risks, and improves trading outcomes.

Future Scalability: Expansion into stocks, forex, and other financial markets, ensuring adaptability to evolving trader needs.

Market Impact: The assistant transforms how traders respond to market trends, making financial decisions more efficient.

References

[https://
www.alphavantage.co/](https://www.alphavantage.co/)