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# MarketPulse Dashboard – Personalized Financial Insights

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## WHY? – Why is this project important?

- Financial markets are fast-moving and complex; investors often struggle to stay updated with prices, trends, and news.
- Raw news articles are long and unstructured, making it hard to quickly grasp market-relevant insights.
- Sentiment and volatility data are often scattered across multiple platforms, reducing decision-making efficiency.
- **Problem:** Users need a centralized, real-time, and intelligent dashboard for actionable market information.

## HOW? – How will my solution solve the problem?

- MarketPulse consolidates multiple data sources into a single, interactive dashboard.
- It uses **Amazon Bedrock AI** to summarize financial news quickly, saving time and highlighting key insights.
- Sentiment analysis and volatility calculations provide additional context for smarter investment decisions.
- Real-time updates on stocks, cryptocurrencies, and currencies keep users informed continuously.
- User-friendly interface with customizable themes ensures an engaging and personalized experience

## WHAT? – What specifically does my solution do?

- **Live Prices & Trends:** Tracks stocks, crypto, and currency pairs with real-time updates.
- **Demo portfolio:** Gives insights to how your investments build PNL.
- **News Summarization:** Fetches latest news and generates AI-powered concise summaries.
- **Sentiment Analysis:** Measures market sentiment (positive, neutral, negative) from news.
- **Volatility Metrics:** Displays recent price volatility to highlight market risks.
- **Detailed Charts:** Shows historical trends with customizable timeframes.
- **Customizable Dashboard:** Users can select assets, themes (light/dark), and AI summarization.
- **Integration:** Combines Yahoo Finance, NewsAPI, and Amazon Bedrock into a single interactive interface.



# Key Features

- 1. User login and personalization
- 2. Add/remove tracked assets
- 3. Fetch and summarize latest news
- 4. Live prices and volatility charts
- 5. Toggle light/dark mode
- 6. Sentiment analysis from news articles
- 7. Amazon Bedrock AI integration for concise summaries(coming soon.....)
- 8. Demo Portfolio for real time insights

# Technology Stack

- Frontend & UI: Streamlit, Plotly
- Data Sources: Yahoo Finance, NewsAPI
- AI Summarization: Amazon Bedrock (Claude v2)
- Sentiment Analysis: TextBlob & NLTK
- Storage: Local JSON for user preferences

# Streamlit Dashboard UI

- - Sidebar: Asset selection, AI options, theme selection
- - Main view: Live prices, news feed, sentiment charts, Portfolio
- - Detailed charts: Price trends, volatility overview, summary statistics

# Milestones

