Project Proposal

Name of the Project:

AI Financial Assistant

The URL of the Project Web Page:

https://bitirme2025.github.io/AI_Financial_Assistant_Website/

Names of the Team Members:

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Project Description:

This project involves the design and development of an AI-powered personalized financial assistant aimed at supporting retail investors in making informed investment decisions. The system serves as an intelligent analytical assistant that enables users to analyze market data, receive financial news summaries, and obtain portfolio-specific insights through an intuitive natural language chat interface, focusing on augmenting the user's decision-making process rather than executing direct trades.

The platform integrates multiple advanced AI modules, including news-based sentiment analysis, individual stock and sector index forecasting using Temporal Convolutional Networks (TCN) and MAMBA models, and a reinforcement learning-based portfolio optimizer that adapts to users' risk profiles. Additionally, a Retrieval-Augmented Generation (RAG) module is implemented to allow users to upload and query financial documents, bridging the gap between complex financial analysis and accessible, interpretable guidance for individual investors.