Functional requirements

* The system should have an easy-to-use web interface that allows users to simply upload financial documents. This feature shall particularly allow for common spreadsheet formats with support for both .csv and .xlsx files to achieve wide compatibility for user input.
* Users will be allowed to identify the nature of the financial document they are uploading through a distinct choice mechanism, i.e., radio buttons or dropdown menu. This precise categorization (i.e., Balance Sheet, Profit & Loss Statement, Cash Flow Statement) is essential to direct the contextual analysis by the AI.
* The application's backend shall be able to effectively read and correctly parse the contents of the uploaded .csv and .xlsx files. This action will transform the raw spreadsheet data into a structured and easily manageable pandas DataFrame format, suitable for AI processing.
* The system should offer an easy and intuitive means for users to specifically initiate the AI analysis process after their financial document has been successfully uploaded and its type chosen. This will usually be through a banner "Generate Reports" button.
* The application will apply dynamically pre-defined context-relevant prompt templates to the structured financial data that have been loaded. This provides the incorporated Google Generative AI model with instructions specifically relevant to each individual document type (Balance Sheet, P&L, Cash Flow).
* The AI model, based on the contextual prompts, will be charged with generating concise, clear, and insightful text summaries from the examined financial data. They must point out significant financial metrics, important trends, and give actionable insights into the specific document.
* The system must generate and display appropriate data visualizations automatically based on the examined financial data. These visualizations, e.g., line charts for analyzing trends or bar charts for comparisons, are aimed to facilitate easier interpretation of intricate data at a glance.
* Both the AI-generated text summary and the related data visualizations shall be visibly and in a clear manner presented on the user interface. The design must be structured and easily readable, allowing users to immediately access and grasp the analysis findings.
* The system should provide safe management and use of the configured Google API Key for Google Generative AI services. The key should never be hardcoded in the application and should be accessed through secure means, such as environment variables or Streamlit secret management.