Project Name :   **Insightify**
Expected Date of Completion: February 15, 2025

Problem Statement:

Client requires the development of a robust and efficient platform to handle various functionalities related to data processing, analysis, and user interaction.

Problem Overview:

As data volumes continue to grow exponentially, extracting meaningful insights while ensuring security becomes increasingly challenging. Managing confidential documents, including NDAs and financial records, requires a secure and efficient approach. Additionally, manually processing vast amounts of financial data to generate accurate insights is both tedious and prone to errors, making automation essential for efficiency and security.

Proposed Solution:

Insightify, with its advanced graphical and summarization tools, efficiently processes, reads, and summarizes data in various formats, including text, tables, and PDFs, while generating meaningful insights. It not only extracts key information but also generates **interactive graphs, balance sheets, and financial portfolios**, providing a comprehensive analysis of financial data. Its **authenticated RAG** system ensures secure and accurate query responses using user-provided NDAs and documents. Additionally, its **Smart OCR** functionality enhances document processing by extracting and delivering valuable insights with precision, making data interpretation seamless and insightful.

Key features:

Seamless Authentication : Login via Google & LinkedIn, secure RAG access.
Data Fetching : Integrates with Google Drive, WhatsApp API, YouTube transcripts, and external APIs.
Smart Summarization : Processes text, tables, PDFs, using OCR (Claude, GPT API) with hybrid search & chunking.
Financial & Graphical Insights : Generates graphs, P&L statements, balance sheets, and financial portfolios.
Secure RAG & Query Handling : Automates NDA/document management, enables context-aware search via vector databases.
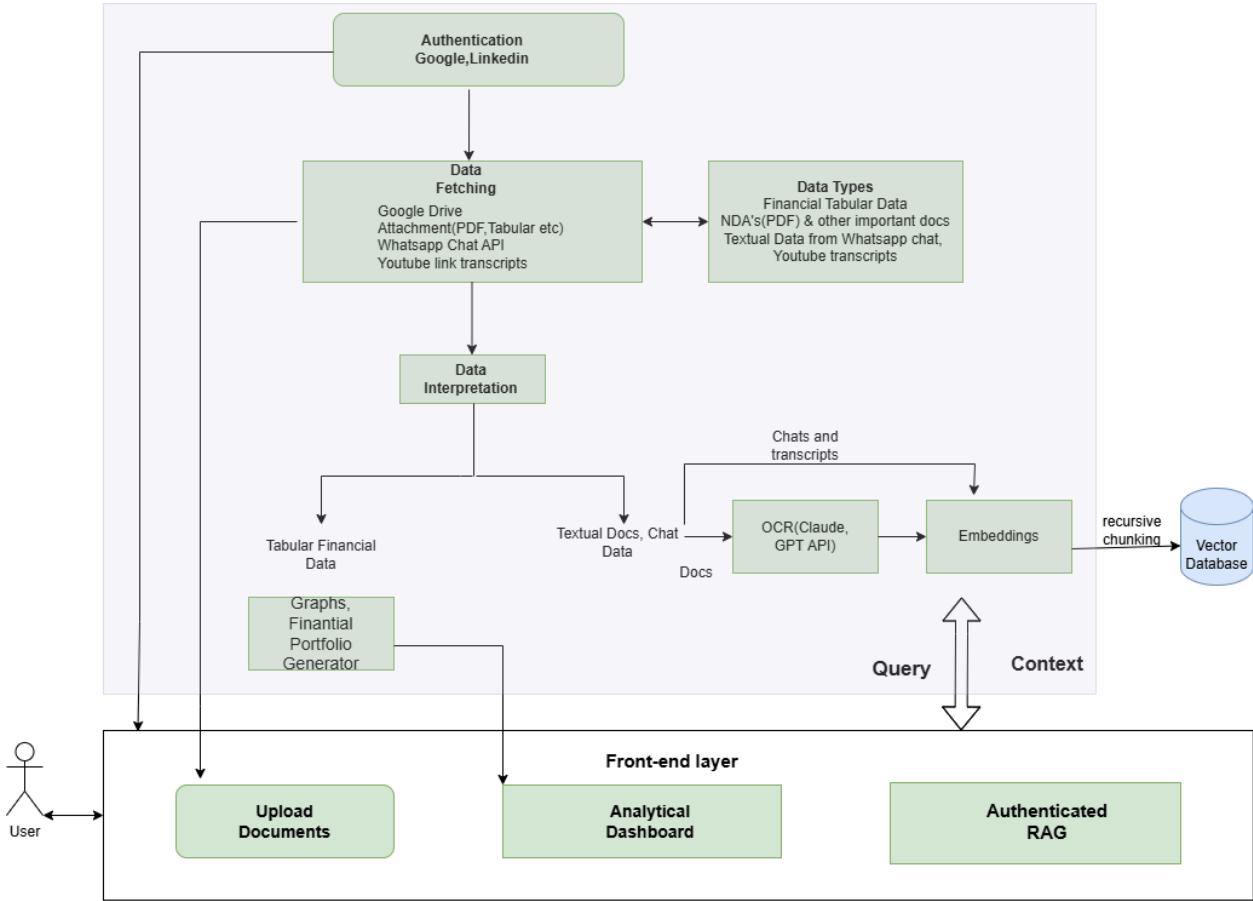**Data Export & Parsing** : Downloads in CSV/XML, efficient PDF parsing for tabular data.
User-Friendly Interface : Dynamic headings, intuitive dashboard, and modular, scalable design.
WhatsApp Chat Processing : Uploads & processes text files, including emoji encoding.
Compliance & Documentation : Industry-standard security with detailed system documentation.

Proposed Architectural Diagram:

Tech Stack:

Frontend : React.js + TailwindCSS
Backend : FastAPI and Node.js to connect to API and local model if required
Database & Storage: Pinecone for Vector database for Embedding Storage of textual data and MongoDB for unstructured data storage
Business Logic :
RAG System: Pinecone + Llama for retrieval & generation
OCR: Claude, GPT Vision, Donut, LayoutLMv3(tentative) for document insights
Authentication & Security: OAuth 2.0 (Google, LinkedIn)

Timeline with Milestone:

Day	Task	Milestones

Day 1-2	File Handling & Authentication	Implement file upload & retrieval (Google Drive etc), develop API for document management. Integrate Google & LinkedIn login (OAuth 2.0),
Day 3-5	Retrieval-Augmented Generation (RAG) System	Set up Pinecone vector database, implement query processing using Llama, optimize document chunking & hybrid search.
Day 6-7	OCR & Data Summarization	Integrate Claude & GPT Vision for OCR text extraction, develop summarization for WhatsApp chats, PDFs, and documents.
Day 8-10	Graph & Report Generation	Automate financial insights (PnL, Balance Sheets, Financial Portfolios).

Deliverables:

Source Code : Full-stack codebase (React, Node.js, FastAPI).
API Endpoints : Secure APIs for authentication, file handling, RAG, OCR, and financial insights.
Database Setup : PostgreSQL for structured data, Pinecone for vector storage.
AI Models & Integration : Llama for RAG, GPT Vision & Claude for OCR, financial automation scripts.