

IT314 – Software Engineering

Group 22 – Fingenie

AI – Powered Balance Sheet Analysis Tool

Functional and Non-functional Requirements

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Functional Requirements :

FR-1: User Authentication & Secure Access

The system allows users to sign up, log in, and use every feature securely. Only authorized users get to view or upload financial data, no unauthorized users are allowed.

FR-2: Financial Document Upload

Users can upload their company's balance sheet or financial statements in PDF, Excel, or CSV. Once they have uploaded it, the platform starts working on processing the info.

FR-3: Automatic Data Extraction

After a user uploads a file, the system comes in and extracts the key financial details like assets, liabilities, revenue, and expenses.

FR-4: Ratio and KPI Calculations

The system calculates important financial ratios and performance indicators so users can get a clear picture of the company's financial health, all at once.

FR-5: Company Summary Generation

It takes the extracted data and creates a plain summary of the company's financial performance. Summaries are easy to read, so the user can get a clear understanding.

FR-6: Trend Detection & Visualization

The system analyzes financial data across multiple years, captures trends, and shows them with graphs and charts. Users can see at once how the trends have changed over time.

FR-7: Sector Overview Dashboard

There's a dashboard that gives users a snapshot of the company's sector, including industry averages and benchmarks for easy comparison.

FR-8: Company Search Feature

Users can search for any listed company and instantly pull up financial details, news, and key performance numbers.

FR-9: Sector Comparison for a Company

The system compares a company's metrics to the sector average and calls out where the company shines or falls behind.

FR-10: Two-Company Comparison

Users can watch two companies side-by-side, compare them on multiple financial aspects, and see which one comes out on top.

FR-11: AI-Insight (general chatbot)

The user can get answers to all financial related queries.

FR-12: Chatbot in Summary Page

The chatbot answers all the questions related to summary generated and any financial problem like explaining the terms, ratios etc.

FR-13: Real-Time News Integration

The system brings in the latest news on sectors, companies, and markets, so users always stay updated.

FR-14: Blog Page

There's a blog packed with articles, where users can see blogs, and also upload blogs.

FR-15: Word of the Day

Every day, the system shares a financial term to users, so that they can learn something new every day.

FR-16: Interactive Daily Quiz

The system creates a daily quiz based on the Word of the Day or related topics, so the user can test their financial knowledge themselves.

FR-17: Visual Representation of Data

Complex financial data is transformed into simple charts and visuals. Users see the big picture without getting lost in the numbers.

FR-18: Data Storage & Reuse

The system keeps all previously uploaded analyses handy, so users can revisit or compare past results whenever they want.

Non-Functional Requirements**NFR-1: Performance**

The system must respond fast and process financial documents as fast as possible..

NFR-2: Accuracy

Every calculation, ratio, and insight should be spot-on and always based on the data that users provide.

NFR-3: Security

Users' data, documents, and accounts must stay protected with secure login and encrypted data handling

NFR-4: Usability

The interface is clean, simple, and easy to use. Even first-time users can find their way around without hassle.

NFR-5: Reliability

The system stays stable and available, so users can count on it for daily financial checks, news, and learning, no unexpected outages