

Functional Requirement Document

Project Title: Financial Data Chatbot (FDC)

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1.0 Introduction

The Financial Data Chatbot (FDC) is a platform aimed at providing seamless access to financial data through a user-friendly chatbot interface, using technologies such as SQL, Python, and the Alpha Vantage API.

1.1 Purpose

To create an accessible and efficient means for users to query specific financial data and receive immediate, real-time results through an AI-powered chatbot.

1.2 Scope

The software aims to provide:

- Real-time financial data queries using the Alpha Vantage API.
- Immediate answers to common financial questions through an AI chatbot.
- User-friendly interface for diverse audiences.

1.3 Team

Name	Role	Email/Phone
JOEL MENDONSA	PYTHON DEVELOPER	Jmendonsa8141@conestogac.on.ca
JORGE SABOGAL	PYTHON DEVELOPER	jsabogaltamayo6485@conestogac.on.ca
MOULYA BANGALORE PRADEEP	PYTHON DEVELOPER	mpradeep3556@conestogac.on.ca

2. Functional Requirement

#	Functional Requirement	Category	Notes	Priority	Owner
1	User Interaction with Chatbot	Chatbot	1.1 Users should be able to interact with the chatbot using natural language text input. 1.2 The chatbot should provide relevant answers and financial data based on user inquiries. 1.3 The chatbot interface should be intuitive and easily accessible from the main page.	HIGH	JOEL
2	AI Chatbot Conversations	Chatbot	2.1 The chatbot should understand and respond accurately to user queries. 2.2 The chatbot should handle natural language inputs and maintain context in a conversation.	HIGH	JORGE
3	Security and Data Protection	Security	3.1 Ensure that user data and queries are protected and encrypted. 3.2 Regularly audit and test for vulnerabilities in the application.	HIGH	MOULYA
4	Notification System	Alerts	4.1 Inform users about the successful/failed data fetch operations. 4.2 Provide alerts for notable financial data changes if subscribed to.	MEDIUM	JOEL
5	User-Friendly Interface	UX/UI	5.1 The interface should be intuitive	HIGH	JORGE

			and easy to navigate. 5.2 It should be responsive and accessible on various devices and screen sizes.		
6	Data Visualization	Data	6.1 Provide charts and graphs for visual representation of financial data. 6.2 The visualization will be a graph containing the prices of the stocks, showing the user whether it is high or low.	HIGH	JOEL
7	User Profile Management	User	7.1 Allow users to create and manage profiles. 7.2 The user's profile and the data that has been provided will be stored in the database so we can retrieve information about the user whenever the user needs to access the information.	HIGH	MOULYA
8	Historical Data Access	Data	8.1 Users should be able to retrieve and view historical financial data.	MEDIUM	JOEL
9	Feedback and Rating System	Feedback	9.1 Enable users to provide feedback on data accuracy and user experience. 9.2 Allow users to rate the chatbot's responses. 9.3 It also will allow the user some feedback on any improvements needed.	MEDIUM	JORGE
10	FAQs and Help Center	Help	10.1 Include a section for frequently asked questions. 10.2	MEDIUM	MOULYA

			Implement a help center for user assistance.		
11	Custom Alerts	Alerts	11.1 Allow users to set up custom alerts for specific financial data changes. 11.2 Ensure alerts are sent in real-time.	HIGH	JOEL
12	API Integration	API	12.1 Ensure smooth integration with the Alpha Vantage API. 12.2 Handle API issues and failures gracefully. 12.3 Will let the user know if the real time data fetched cannot be found.	HIGH	JORGE
13	Multi-Language Support	Language	13.1 The chatbot should support multiple languages. 13.2 Users should be able to easily switch between languages. 13.3 There is a limited range of languages, so the user will have limited access to only a few selective languages.	LOW	MOULYA
14	Reporting and Analytics	Reports	14.1 The system should generate reports on user activity and data queries. 14.2 Admin should be able to access and analyze reports for decision-making. 14.3 These reports can help the admin understand whether it performed well or whether there were any issues with	HIGH	JOEL

			the output and performance.		
15	Accessibility	UX/UI	15.1 Ensure the application is accessible to users with disabilities (e.g., screen readers, keyboard navigation).	HIGH	JORGE
16	User Authentication and Authorization	Security	16.1 Users must be authenticated before accessing personalized financial data. 16.2 Different levels of authorization should be implemented to restrict access to various parts of the application.	HIGH	MOULYA
17	Real-Time Data Updates	Data	17.1 The chatbot should provide real-time updates of financial data without requiring a page reload. 17.2 Users should be notified of significant real-time changes in the data they are viewing.	HIGH	JOEL
18	Data Exporting	Data	18.1 Users should be able to export financial data (e.g., historical data, charts) in various formats (e.g., CSV, PDF).	MEDIUM	JORGE
19	Search Functionality	UX/UI	19.1 Users should be able to search for specific financial data using a search bar. 19.2 Search results	HIGH	MOULYA

			should be accurate and relevant.		
20	Error Handling and Help	Help	20.1 Provide clear error messages and guide users toward solutions. 20.2 If the chatbot cannot answer a user's question, it should guide them to the help center or FAQ.	HIGH	JOEL
21	User Tutorial	UX/UI	21.1 Implement a user tutorial or walkthrough for first-time users to understand how to interact with the chatbot and use the platform.	MEDIUM	JORGE
22	User Activity Log	User	22.1 The system should keep a log of user activities for auditing purposes. 22.2 Users should be able to review their activity log.	MEDIUM	MOULYA
23	Social Sharing	Social	23.1 Allow users to share interesting financial data or news directly from the platform to social media.	LOW	JOEL
24	Customer Support	Support	24.1 Implement a customer support chat or contact form for users to ask questions or report issues.	MEDIUM	JORGE
25	Content Customization	User	25.1 Users should be able to customize the type of financial data and news they see on	HIGH	MOULYA

			their homepage/dashboard. 25.2 The system should learn from user interactions and suggest relevant data.		