

QuadraSystems

Weekly Report

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B-Tech(AI&DS)

Intern-QuadraSystems

Week-3

Goals

Goals Completed This Week:

1. Implemented Navigation Bar:

Developed and integrated a responsive navigation bar that allows seamless transition between different pages of the Zuno AI web interface. This improves user experience and page accessibility.

2. Instruction Set for Zuno AI:

Defined and embedded structured instructions to guide the behavior and tone of the chatbot. These instructions ensure that Zuno responds with a consistent, helpful, and professional personality aligned with its role as a financial assistant.

3. Knowledge Base Integration:

Created a foundational knowledge base to help the Gemini API understand and process financial queries more effectively. This acts as a reference model for training Zuno to give more contextual and relevant responses.

4. File Upload Functionality:

Added a file upload button to the chat interface, enabling users to submit financial documents and data files for analysis. This opens the pathway for document-based intelligence.

5. RAG (Retrieval-Augmented Generation) with File Input:

Initiated Retrieval-Augmented Generation using the uploaded files, enabling Zuno to analyze user-provided documents and extract relevant insights. This step bridges the uploaded data with real-time intelligent responses.

6. Enhance document-based RAG with advanced retrieval techniques:

7. Integrated **Semantic Search**, **Similarity Search**, and **Vectorization** to improve the accuracy of document retrieval from uploaded files. Enabled Zuno to understand the **context and meaning** behind queries, match them with relevant document segments, and respond with appropriate **citations** pointing to the exact source of the information.

Navigation Bar

Created a functional **navigation bar** to allow users to travel seamlessly between the **Home** page and the **Zuno AI chatbot** interface.

This enhances the user experience by providing intuitive access to different parts of the application

The screenshot shows the Zuno Tracker application interface. At the top, there is a navigation bar with the Zuno Tracker logo on the left and 'Home' and 'Zuno AI' buttons on the right. Below the navigation bar, the main content area is divided into several sections:

- Expense Tracker:** Displays the current balance of ₹ 76942.00, income of ₹100922.00, and expense of ₹23980.00.
- History of the Recent Transactions:** A table showing recent transactions:

Type	Amount
Entertainment	-₹2900
laptop	-₹12000
salary	+₹100922
movies	-₹1200
- Add new Transaction:** A form for adding a new transaction with fields for Description, Amount, and Type (Income or Expense), and a 'Add Transaction' button.
- Expense Distribution:** A pie chart showing the distribution of expenses:

Category	Percentage
Entertainment	20.9%
laptop	50%
movies	12.1%

The screenshot shows the Zuno AI chatbot interface. At the top, there is a navigation bar with the Zuno Tracker logo on the left and 'Home' and 'Zuno AI' buttons on the right. The main content area is a conversation window:

- Welcome to Zuno.ai:** Your Personalized AI Assistant
- Message History:**
 - You: Hello!
 - Zuno: Hi! How can I help you with your expenses today?
- Input Field:** A text input field with placeholder text 'Type your message...' and a send button.

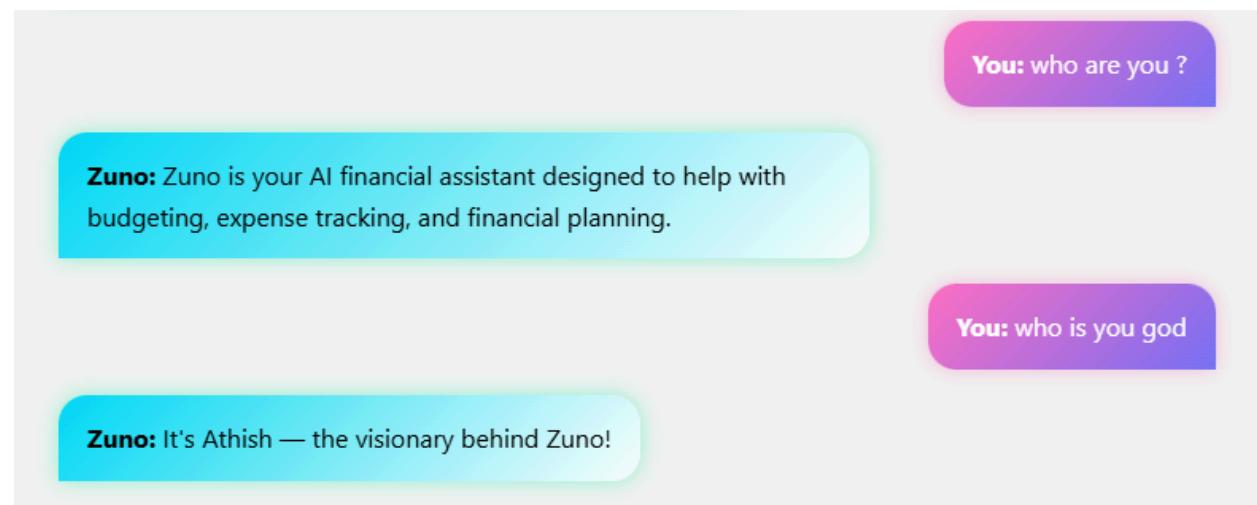
Instruction Set for Zuno AI

Defined and implemented a structured **instruction set** to guide Zuno's tone, behavior, and response style.

Ensured Zuno maintains a **warm, professional, and concise** tone tailored for **personal finance assistance**.

These instructions help the AI stay consistent and focused on financial context while interacting with users.

```
const knowledgeBase = [
  {
    question: "what is zuno?",
    answer: "Zuno is your AI financial assistant designed to help with budgeting, expense tracking, and financial planning."
  },
  {
    question: "who are you?",
    answer: "Zuno is your AI financial assistant designed to help with budgeting, expense tracking, and financial planning."
  },
  {
    question: "what is the purpose of zuno?",
    answer: "The purpose of Zuno is to assist users with their financial decisions, track expenses, suggest savings tips, and make money management easier."
  },
  {
    question: "who created zuno?",
    answer: "Zuno was created by Athish C.K – a passionate AI enthusiast from Shiv Nadar University, Chennai."
  },
  {
    question: "who is your god?",
    answer: "It's Athish – the visionary behind Zuno!"
  },
  {
    question: "how can zuno help me?",
    answer: "Zuno can help you plan budgets, track your daily expenses, give you insights into your spending habits, and even provide smart financial advice based on your goals and preferences."
  }
]
```

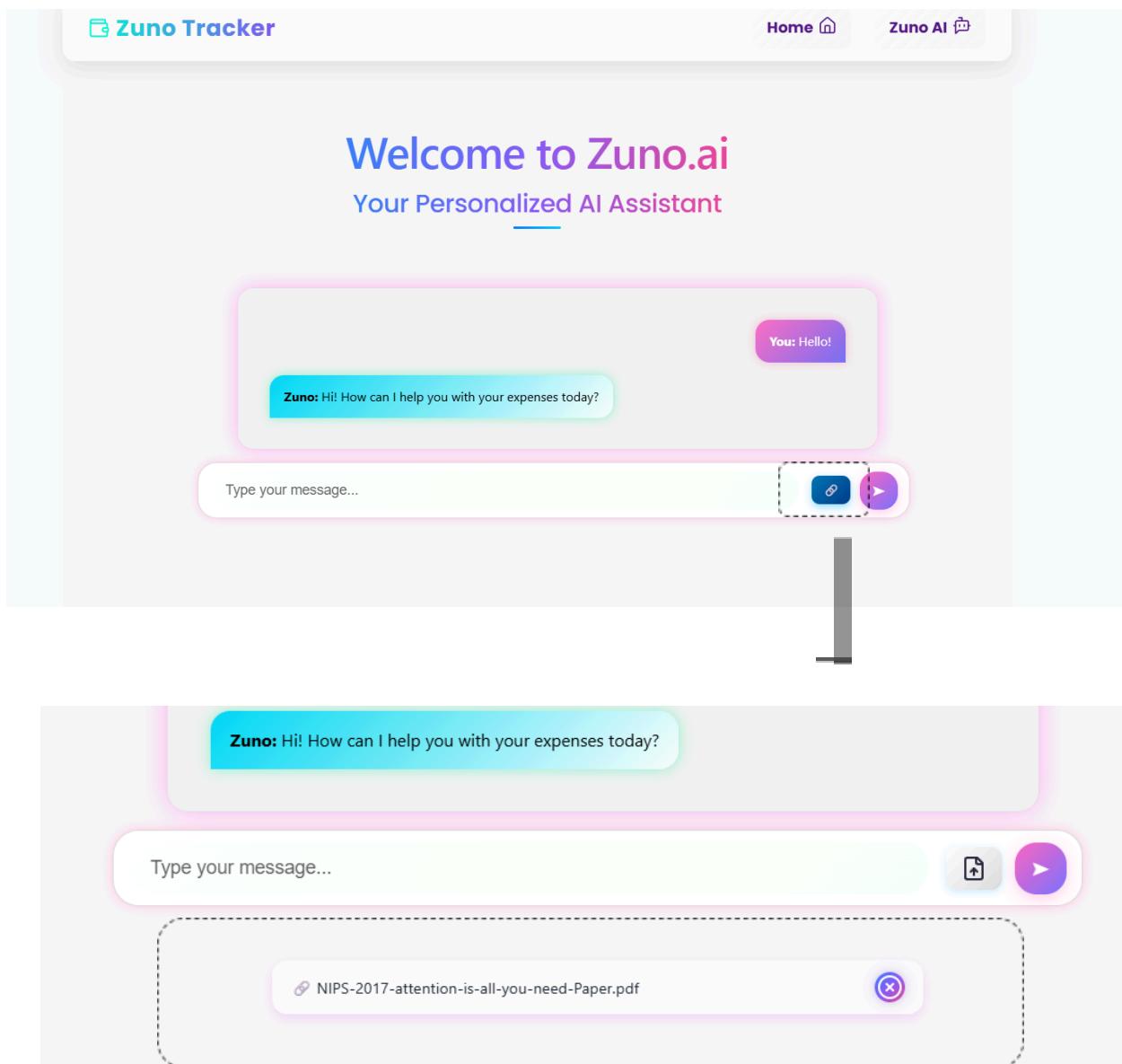


File Upload Functionality:

Added a **file upload button** to the Zuno interface, enabling users to upload financial documents or data files.

Ensured proper handling of uploaded files for further processing and analysis.

This functionality lays the groundwork for document-based interactions and advanced AI-driven analysis.

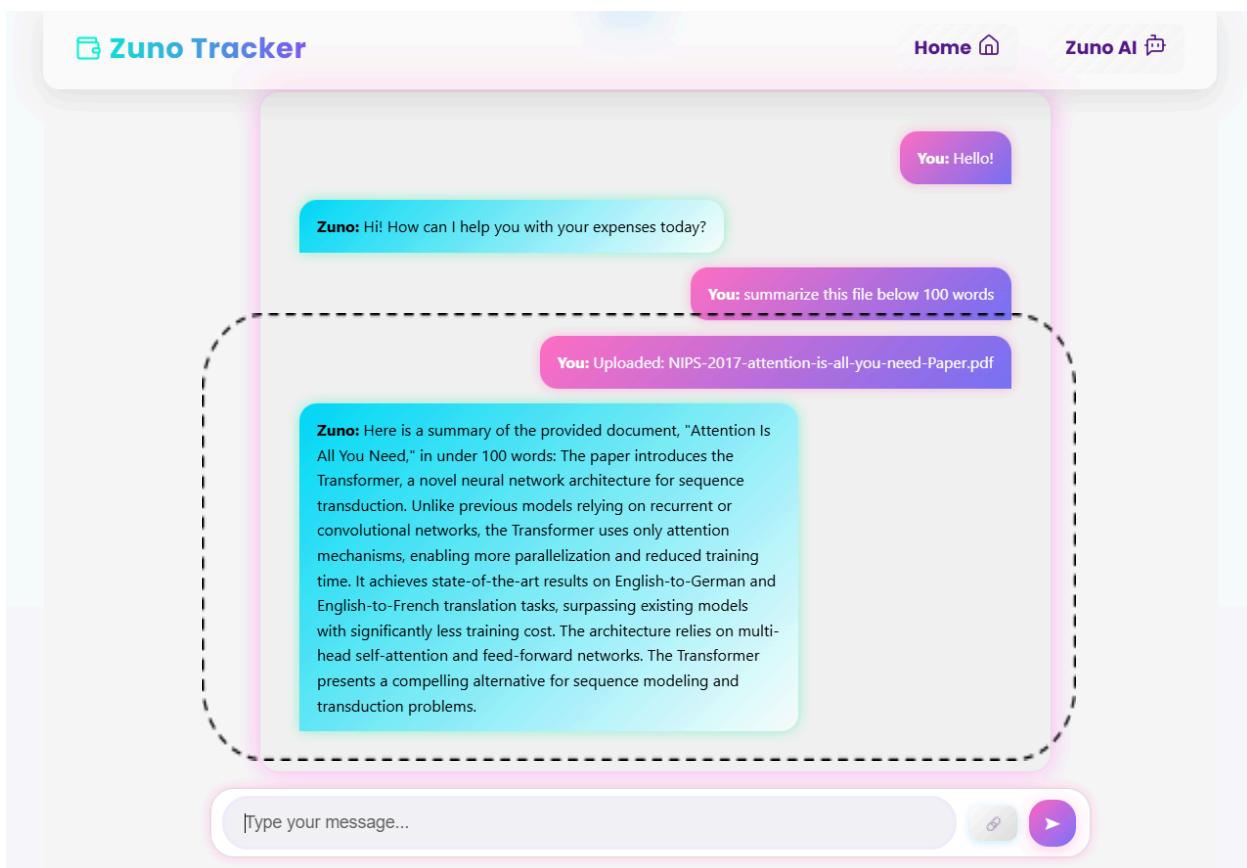


RAG (Retrieval-Augmented Generation) with File Input

Integrated **RAG (Retrieval-Augmented Generation)** to analyze the contents of user-uploaded files.

Enabled Zuno to **retrieve relevant information** from the uploaded documents and **generate accurate, contextual responses** based on that data.

This allows Zuno to deliver personalized insights by combining AI generation with real-time document understanding.



Zuno Tracker

Zuno: Hey there! How can I help you with your finances today?

You: can you tell about this report ?

You: Uploaded: cdn-dynmedia-1.microsoft.csv

Zuno: This report appears to be Microsoft Corporation's quarterly income statements, presented in millions of dollars, spanning from Q1 2016 to Q3 2025. It details the company's revenue streams (Product and Service), cost of revenue, gross margin, operating expenses (Research and development, Sales and marketing, General and administrative, Impairment and restructuring), operating income, other income/expenses, income before taxes, provision for income taxes, and net income (loss). The report also includes earnings per share (basic and diluted). From a financial perspective, analyzing these statements over time can provide insights into Microsoft's growth, profitability, and operational efficiency. For instance, you could calculate key ratios like gross profit margin, operating margin, and net profit margin to assess the company's profitability trends. You could also analyze the growth rates of different revenue streams and expense categories to understand the drivers of Microsoft's

Type your message...

Zuno Tracker

Welcome to Zuno.ai
Your Personalized AI Assistant

Zuno: Hi! How can I help you with your expenses today?

You: Hello!

Type your message...

Home

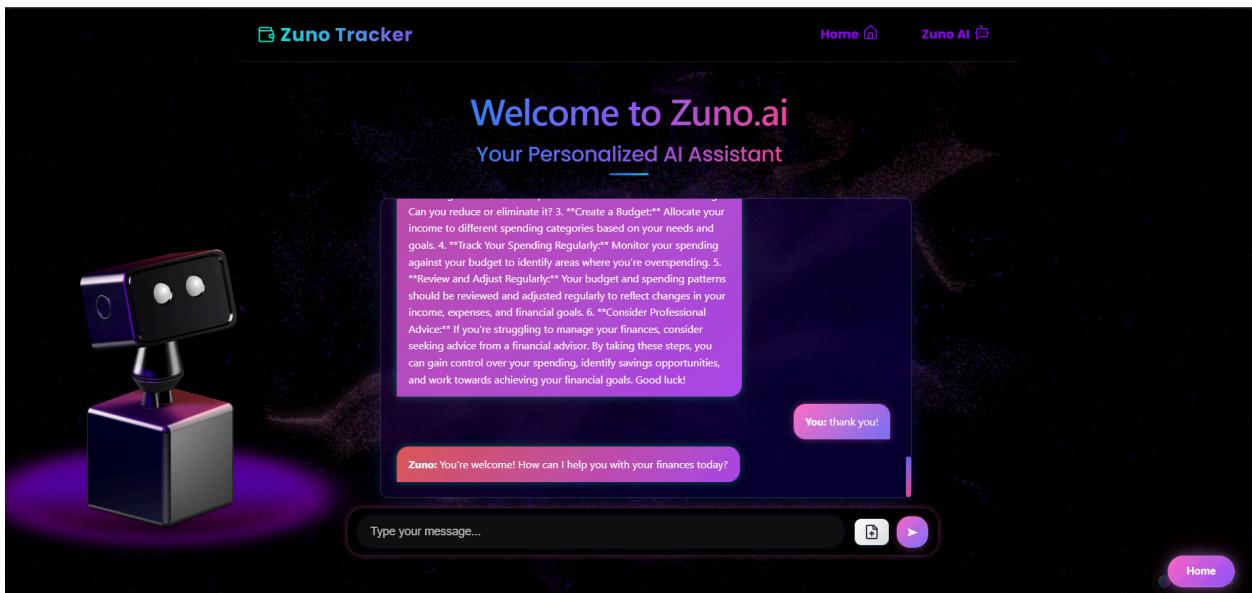
Morden UI and Theme

Giving Zuno a much modular look and format so that it gives a more vibrant and more user-friendly look towards the model .

Connecting with the local DBMS

Zuno: Okay, let's analyze your expenses and figure out how to manage them better. Here's a breakdown based on the transaction data you provided, keeping in mind we're working with limited information: **Expense Management Analysis in RS** (I'm assuming "RS" refers to Rupees, but the recommendations are applicable regardless of currency): **1. Spending Patterns:** * **High Uncategorized Spending:** A whopping \$76,712.00 is uncategorized, representing the vast majority of your transactions. This is the biggest red flag. Without knowing where this money is going, it's impossible to effectively manage your spending. * **Expense Frequency:** You have 6 recent expense transactions compared to 1 income transaction, indicating regular outflows of funds. **2. Potential Savings Opportunities:** * **Categorize Your Transactions:** The *single most important* thing you can do is categorize your expenses. Use a budgeting app, spreadsheet, or manually review bank statements to assign categories to each transaction (e.g.,

Zuno was successfully integrated with the local DBMS, enabling real-time access to user-specific financial data. This enhancement significantly improved the model's efficiency in analyzing transactions, identifying spending patterns, and generating personalized insights. With this integration, Zuno delivers more accurate, context-aware financial guidance, offering users a tailored experience that aligns with their individual financial behavior and goals.



Conclusion

With the successful completion of Zuno's full-stack architecture, we have developed a robust AI-powered expense tracker that delivers intelligent financial insights. The system empowers users to manage their expenses more efficiently through personalized recommendations, seamless data analysis, and an intuitive interface. This integration of AI with a vibrant and user-centric design ensures a smarter, more engaging financial management experience.