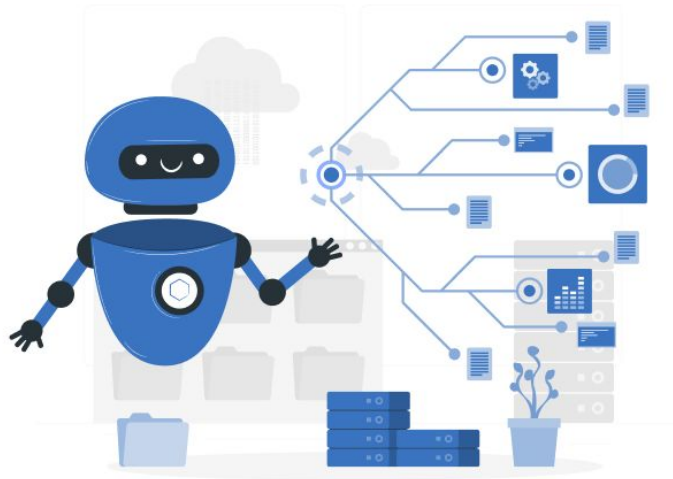# Project Review

20pd10
Shakthi Mahendira K

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About – TVS Digital

Founded in May 2021, TVS Digital is a Singapore-headquartered company delivering innovative solutions for the Automotive and Financial Services industries using cutting-edge technologies. The company operates across ASEAN and South Asia, with a growing global presence and a team of over 200 professionals.

Key Offerings:

• **Products:** Autotech & Fintech platforms that have evolved and scaled over the past three years.

• **Services:** Implementation and support for industry-leading platforms like Salesforce.

Certifications & Compliance:

• ISO27001 & APEC Data Privacy Certification for security and credibility.

• VAPT Certified by reputed assessors in Singapore.

Core Values:

• Trust, Passion, and Respect for customers & employees.

• Innovation @ Speed with a focus on continuous learning.

• Empowerment, open communication, and customer-centric solutions.

TVS Digital is rapidly scaling its services business in India while expanding into new geographies, driving profitable growth with a high-performance team.

Website: www.tvsd.ai

Headquarters: Singapore

Founded: 2021

Specialties: Automotive, Fintech, Software, Data Science, UX/UI, SaaS/PaaS, and Program Management

Internship Overview

Joined TVS Digital as a Data Science Intern in December 2024.

• Worked on two key projects:

1. **AI Chatbot** – Built a Sales Copilot using RAG with the **Gemini Flash LLM.**

2. **Rule-Based + AI Chatbot** – Developed a ticket resolution L0 chatbot that combines **Rule-based** logic with RAG using the **Gemini Flash LLM.**

Project 1 – Sales Copilot

Objective:

Develop a Sales Copilot to assist sales personnel. In showrooms, there are often new hires, making it challenging to train them on vehicle details and other essential information. An AI-powered assistant can be installed to help sales personnel quickly access and provide accurate information to customers, enhancing their efficiency and customer experience

Key Features:

✔ Handles both structured and unstructured data.

✔ Uses **Langchain-Agents** to determine which data to utilize.

✔ Employs **PostgreSQL** for structured data and **Pinecone** for vector storage.

✔ Built with **Streamlit** for the user interface.

✔ Utilizes **Cohere embeddings** and **Pinecone** for vector storage.

✔ Implements **Retrieval-Augmented Generation (RAG)** with **Gemini Flash LLM**.

✔ Escalates complex cases to human agents when necessary.

Project 2 – L0 Bot

Objective:

Develop a chatbot to efficiently resolve user tickets.

In the support system, there are three teams: L1 (Support Team), L2 (Data Team), and L3 (Technical Team). The challenge is that the L1 team receives a high volume of queries, but due to a small team size, handling them efficiently becomes difficult.

To address this, we plan to develop an L0 bot that will:

✔ Collect user data and issue details before creating a ticket.

✔ Allow the L1 team to pick up and resolve tickets when available.

✔ Handle repetitive and minor issues by providing automated AI-driven solutions.

✔ If the issue is resolved, no need for L1 intervention; otherwise, the L1 team takes over
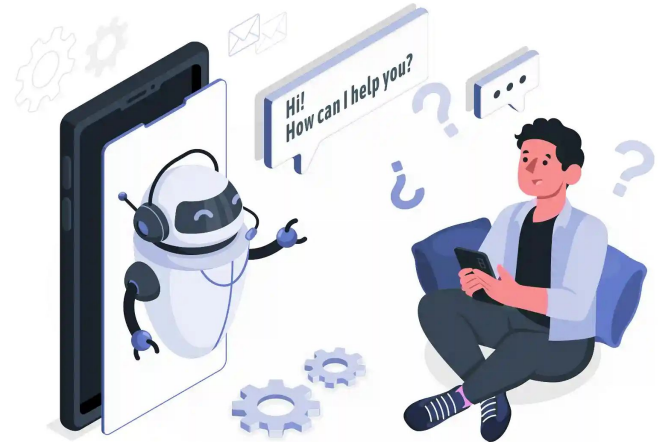
Key Features:

✔ **L0 bot designed to reduce the workload of the L1 bot.**

✔ **Rule-based chatbot built using Flask.**

✔ **Collects user details and issues they are facing.**

✔ **Automatically creates tickets in Zendesk.**

✔ Attempts to provide **AI-generated** solutions—if the user is satisfied, the ticket is closed; otherwise, it is escalated to a live agent.

✔ Utilizes **Cohere** embeddings and **Pinecone** for vector storage.

✔ Implements Retrieval-Augmented Generation (RAG) with **Gemini Flash LLM**.

✔ Escalates complex cases to human agents when necessary.

Timeline

Onboarding & Learning Phase

Began exploring LLMs, vector databases, and related technologies, and started working on their implementation.
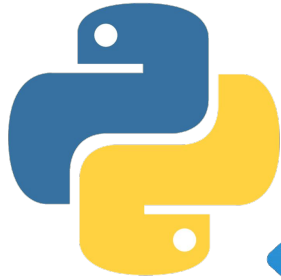
Contributions and Future

• Currently working on a ticket creation chatbot.

• Planning to enable multilingual support in the future.

Jan 2025

Dec 2024

Feb 2025 & Beyond
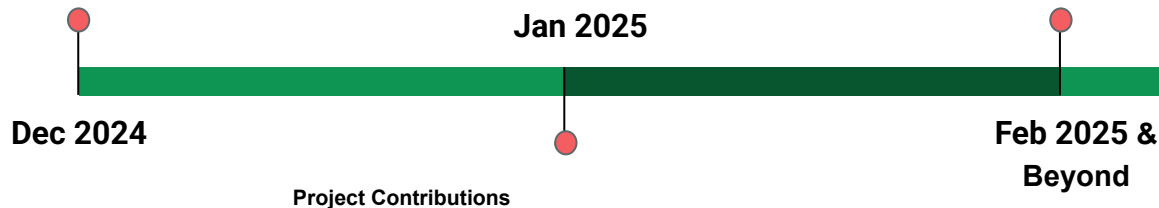
Project Contributions

• Worked on the Sales Copilot, developed a Streamlit-based system, and successfully submitted it. As it is currently in the MVP stage, it will be utilized in the future.

• Began working on the second project.

Tools and Technology Used

Thank You