VECHO AI

December 17 2025
Chitrika, Yash , Maharshi

Vecho AI is a context-aware AI assistant built using Gemini API to improve student learning productivity

1) Goal of the Project

The goal of Vecho AI is to provide users with a smart conversational assistant that can:

- Answer questions
- Explain topics in simple language
- Help with assignments
- Generate summaries and ideas

🎯 **Problem**

- Users waste time searching multiple websites

🎯 **Solution**

- Vecho AI uses Google Gemini API to provide:
- Context-aware responses
- Student-friendly explanations
- Fast and accurate answers
- Code generation

2) Design Patterns Used

a) MVC (Model–View–Controller)

- Model → Database (users, chat history)
- View → Chat UI (web interface)
- Controller → Handles Gemini API requests

b) Singleton Pattern

- Gemini API client initialized once
- Prevents repeated API setup

c) Strategy Pattern
- Different response strategies:
    - Explanation mode
    - Summary mode
    - Q&A mode

3) Technology Used
Frontend
- HTML
- CSS
- JavaScript (Chat UI)

Backend
- Python
- Node js
- Flask

Generative AI
- Google Gemini API
- Prompt Engineering

Database
- SQLite (chat history storage)

Tools
- GitHub
- VS Code

Team Structure

Member Role :

YASH BHATI(58): Gemini API & Backend(Python/ Node Js)
CHITRIKA MUTHAMMA(23): FRONTEND & UI
MAHARSHI GOSWAMI (18): JavaScript, Database & Documentation

Team's Repository Link

Member Role :

YASH BHATI(58): https://github.com/yash08112/Gen-Ai-Project

Chitrika Muthamma(23): https://github.com/Chitrikamuthamma512/Gen-Ai-Project-

MAHARSHI GOSWAMI (18): https://github.com/MaharshiGoswami/agentic-ai