Hack the Future: A Gen AI Sprint Powered by Data

Work at the heart of c*h*ange

Data and AI Week

Guidelines

The template should consist of the following and it is mandated to be used by your team for submitting your innovative ideas/solutions.

Follow file naming format: VJ INNOVATION.pptx

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Team details

TEAM NAME: VJ INNOVATION	

Vikash Kumar – Team Leader

Jitesh

Entry Submission Summary

Idea Title (Provide a concise and impactful title for your idea.)	Empowering Elderly Care with a Multi-Agent AI Companion System
Team Name	VJ INNOVATION
Problem Statement	Elderly individuals often face challenges such as loneliness, missed medications, and lack of real-time health monitoring or emergency support. Traditional care systems are not personalized, proactive, or scalable. There is a growing need for an intelligent, always-available solution that can assist, monitor, and support elderly people in their daily lives while keeping caregivers informed.
Proposed Solution	Our proposed solution is a Multi-Agent AI System designed specifically to enhance elderly care by offering 24/7 intelligent support. The system includes dedicated AI agents that monitor health, provide emotional companionship, send medicine reminders, and alert caregivers in case of emergencies. These agents communicate with each other to create a personalized and proactive care experience. By integrating wearable device data, natural language processing, and real-time alerts, our solution ensures safety, independence, and improved quality of life for senior citizens.

Problem statement you are trying to address

Elderly individuals often lack immediate access to personalized care, medical monitoring, and emotional support. Traditional systems are not proactive and cannot adapt to dynamic needs in real time. There's a need for a smart, data-driven AI system that provides continuous, personalized elderly care.

Proposed Solution Overview

Our solution leverages a multi-agent AI system to deliver hyper-personalized elderly care. It includes agents for health monitoring, emergency detection, emotional support, medication reminders, and caregiver coordination. The system uses real-time data, natural language processing, and adaptive learning to respond to elderly users' needs.

Technologies Used

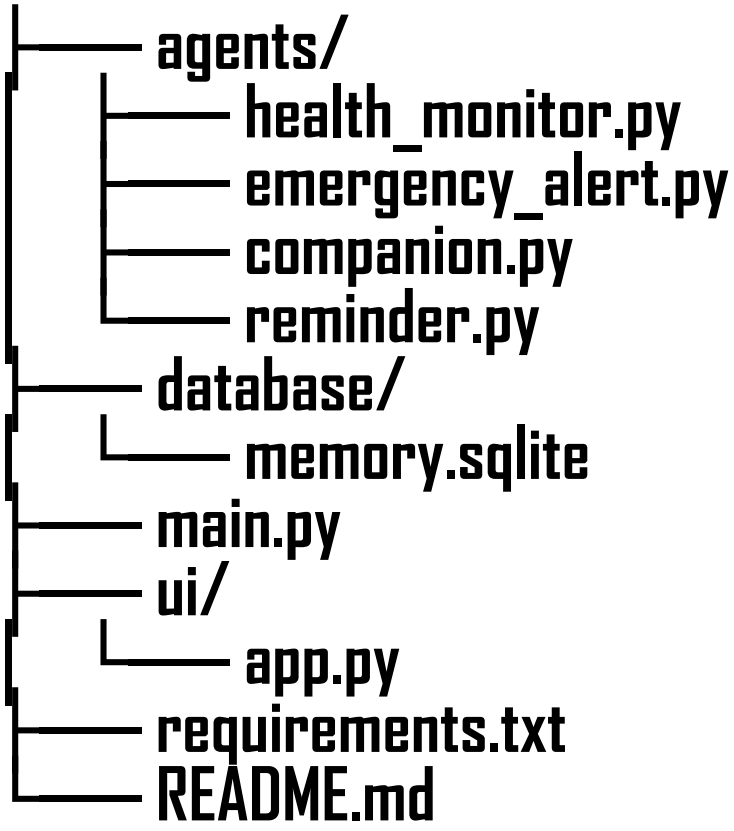
List the key technologies, frameworks, and tools you utilized in your solution

- Python
- LangChain (for multi-agent orchestration)
- OpenAI / LLMs (for NLP and personalization)
- SQLite (for long-term memory)
- Twilio / Email API (for emergency alerts)
- Flask (for backend integration)
- Streamlit / React (for user interface)

Agents' interaction design

- **Health Monitor** Tracks vital stats from wearable devices
- **Emergency Agent:** Detects anomalies, triggers alerts
- **Companion Agent:** Engages in conversation, detects emotional state
- **Reminder Agent:** Medication and appointment notifications
- **Caregiver Coordinator Agent:** Communicates **Agent:** insights to family/caregivers

Code structure



Demo video

Conclusion

Summarize the impact and effectiveness of your solution. Reiterate how it solves the problem statement.

Our system redefines elderly care through a proactive, multi-agent AI approach. It enhances safety, independence, and quality of life by providing 24/7 intelligent support. The modular design ensures adaptability to different use cases and scalable deployment.

References/Other details

LangChain Docs
OpenAI API
WHO reports on elderly care challenges
Wearable device APIs

Thank You

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