📝 Submission: Jazzee GenAI Competition — Final Document

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Problem Statement (100–120 words):
Memory loss caused by dementia significantly affects elderly individuals' ability to recall important personal information such as names, relationships, and conversations. This frequent memory lapse leads to emotional frustration for both patients and caregivers, often requiring repetitive explanation and support. Conventional tools fail to provide an intuitive, voice-based recall system that integrates with patients' daily interactions. The lack of contextual, multimodal memory assistance causes a growing gap between needs and existing technology. Our challenge is to build a mobile-first AI solution that functions like a personalized memory assistant — helping dementia patients recall who someone is, when they last spoke, and important life events, while preserving data privacy and ease of use.

Target Audience & Context (80–100 words):
The primary audience includes elderly dementia patients and their caregivers. These individuals face daily challenges due to fading short-term and associative memory, impacting their independence and well-being. Patients struggle to remember people, events, or relationships, while caregivers are burdened with emotional labor and frequent reminders. In India, where multi-generational families and cultural context are vital, this memory gap creates emotional distance. Our solution focuses on building a voice-first mobile app to serve this audience with simple interaction, personalized memory graphs, and a caregiver dashboard for oversight and privacy control.

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Gen-AI Use Case (120–150 words):
The solution utilizes Generative AI and NLP to enable natural conversations around memory recall. Through voice input, users can ask context-aware questions such as "What's Priya's son's name?" or "When did I last speak to Shyam?" The system integrates Google Speech-to-Text and a conversational AI engine (Google Dialogflow or LLM API) to interpret these queries. A personalized memory graph — constructed from contacts, photos, calls, and messages — allows the system to respond intelligently and emotionally. The assistant replies using simple text and visual prompts (e.g., "You spoke with Priya 4 days ago, here's her photo"). The generative component also summarizes past interactions for caregivers, ensuring they're informed without intrusive monitoring. This framework brings memory to life through conversation, making AI not just a tool, but a comforting companion.

Solution Framework (200–250 words):
Our architecture is designed around a mobile-first, AI-integrated ecosystem. The mobile app is built using React Native + Expo for rapid cross-platform development, optimized for accessibility with voice-first interaction and large UI components. Users speak their queries, which are transcribed using Google Speech-to-Text. These transcriptions are sent securely to a Next.js backend deployed on Vercel.

The backend handles authentication, data queries, and connects with a lightweight generative AI engine such as Dialogflow CX or a custom LLM API to understand the user's

intent. It retrieves relevant information — like contact metadata, photo tags, or recent call logs — from a Firebase Firestore database. Data is organized into a structured personal memory graph, mapping people, relationships, and events.

Photos and tagged faces are optionally uploaded and processed using local recognition tools (e.g., DeepFace). All communication is encrypted, and caregivers can manage patient data access via a web dashboard. The dashboard is built in Next.js and integrates with Firebase Auth for secure access control.

The system supports multi-modal responses: timeline views, tagged photos, and short memory prompts. Our design ensures personalization, offline support (via caching), and low barrier-to-use for elderly users. Voice-first design reduces reliance on visual navigation, creating an emotionally intelligent experience — one that truly "remembers for you."

Feasibility (80–100 words):
The proposed solution leverages existing technologies that are production-ready: Google Speech-to-Text, Dialogflow CX, Firebase, and React Native. All components are deployable within the 48-hour coding window and can be partially prototyped beforehand. Data privacy is maintained using Firebase Auth and Firestore Rules. The caregiver dashboard ensures human oversight, and mobile permissions control sensitive access. The tech stack is proven, well-documented, and scalable. Given that the system does not require building complex models from scratch, development feasibility is high with 4 team members.

Scalability & Impact (80–100 words):
This solution scales across diverse patient profiles by syncing personal data (contacts, photos, call logs) and adapting memory graphs over time. It can be deployed regionally, supporting vernacular languages through existing speech APIs. In India alone, over 8 million dementia patients and their caregivers could benefit from this. In the long term, this solution could integrate with hospitals or elderly care facilities, becoming a plug-in memory support system. The caregiver dashboard enables broader adoption by professionals while preserving personalized control for families. Its emotional and social impact is deeply human — restoring dignity and connection.

Conclusion & MVP Pitch (50–70 words):
We propose ReMind — a personalized memory companion app for dementia patients. At the heart of ReMind is Mira, a gentle and intuitive AI assistant that helps users recall names, faces, and past interactions with simple voice queries. Mira connects emotionally, while the caregiver dashboard provides oversight and peace of mind. Our MVP includes the mobile app, personalized memory graph, and dashboard — fast to build, easy to use, and designed with empathy.

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