Synthiqu - Ambient AI for Cognitive Continuity

A White Paper on Memory Augmentation through Voice Technology

1. Executive Summary

Synthiqu is a voice-powered memory companion that captures spoken thoughts, transcribes them using Whisper AI, generates structured summaries via GPT-4, and enables semantically searchable personal knowledge - all through a discreet, wearable interface.

This document outlines Synthiqu's architecture, intended impact, technical stack, and vision for ambient cognitive augmentation at scale.

2. The Problem: Cognitive Overload in the Information Age

Humans are not designed to manage hundreds of meetings, conversations, ideas, and tasks every week.

- 85% of information received verbally is forgotten within 72 hours

- Professionals spend 5-10 hours/week reviewing old conversations

- There is no seamless, natural interface to "just remember" what was said

3. Synthiqu's Solution

Synthiqu acts as a memory extension, capturing and understanding your voice in context.

Core Capabilities:

- Voice Capture: Via wearable (ESP32-S3) or upload

- Transcription: Whisper API / local Whisper.cpp

- Summary Generation: Structured GPT-4 insights

- Semantic Search: pgvector + OpenAI embeddings

- Snippet Sharing: Shareable, secure audio/text moments

- Dashboard: Web-first, local-first, no mobile app required

4. Technical Architecture

Hardware (optional):

- ESP32-S3 pendant with MEMS mic, SD card, BLE OTA

- Local audio logging and metadata tagging

Backend:

- FastAPI, PostgreSQL + pgvector, Whisper / GPT-4 APIs, Tokenized auth

Frontend:

- Next.js, TailwindCSS, SSR-authenticated dashboard

5. Use Cases

- Therapists: Recall emotional events, client notes

- Execs: Record meetings, auto-summarize, share insights

- Coaches: Voice journaling, timeline reflection

- Researchers: Idea capture, voice-to-knowledge indexing

- Students: Study summaries, passive lectures, search memory

6. Privacy & Ethics

- Default local storage with AES-256

- Optional encrypted cloud sync

- HIPAA-ready configuration

- Opt-in integrations only

- "Zero-knowledge" share links

7. Roadmap

- Phase 1: MVP live

- Phase 2: Semantic search, ESP32 direct sync

- Phase 3: Notion, Google Calendar, CRM integrations

- Phase 4: Wake phrase, real-time capture, voice-to-intent

8. Market Potential

- $147B+ global productivity software market

- Emerging memory health & coaching sector

- Ambient computing + voice AI convergence

9. Closing Vision

Synthiqu is not a note-taking tool. It's cognitive infrastructure - where voice becomes searchable, thoughts become structured, and memory becomes modular.

Synthiqu remembers, so you can move forward.