Abstract 1 – Real-Time AI-Powered Medical Voice Agent

This project presents the design and development of a real-time AI-powered Medical Voice Agent, implemented as a full-stack SaaS application to assist in preliminary medical consultation. The system operates as a virtual doctor, enabling patients to verbally communicate their symptoms, which are processed through AssemblyAI for real-time speech-to-text transcription. The transcribed input undergoes natural language understanding (NLU) for accurate symptom analysis, followed by the generation of AI-based medical guidance.

The application leverages Next.js for server-side rendering, React and TypeScript for building a responsive and maintainable user interface, Clerk for secure authentication and session management, and NeonDB for cloud-based, scalable database storage. The methodology involves integrating low-latency voice processing with conversational AI models to ensure interactive and contextually relevant responses. The UI design prioritizes accessibility and responsiveness, ensuring compatibility across devices and platforms.

Key features include real-time voice recognition, AI-driven symptom analysis, user-specific data management, and secure, scalable storage. This system addresses the need for accessible, preliminary medical consultation tools, especially in areas with limited healthcare access.

The outcome demonstrates a seamless integration of modern web technologies with AI-powered medical dialogue systems, providing an interactive, secure, and efficient digital healthcare assistant. This solution has potential applications in telemedicine platforms, virtual health kiosks, and healthcare chatbots, contributing to the broader adoption of AI in the healthcare sector.

Made by- Simran Kaur Juneja (05118002722)
         Gautam Gupta   (08018002722)

Abstract 2— PromptSpot: Discover Creative Prompts

Prompt Spot is an open-source, AI-driven platform designed to facilitate the discovery, creation, and sharing of creative prompts, empowering users to explore new ideas and enrich their creative workflows. Built with a robust modern tech stack—Host site deployed on Vercel , leveraging frameworks like Next.js and likely using React, Node.js, and JavaScript/Type Script—Prompt Spot embodies intuitive web architecture that supports both real-time interactivity and effortless access.

The platform serves as a centralized hub where creators—writers, educators, artists, developers—can browse a diverse repository of prompts, craft their own entries, and share these for community exploration and feedback. Its architecture includes user-friendly features such as searchable prompt listings, categorization by theme or genre, and community-centric interaction mechanisms (e.g., liking, commenting, or tagging), all built atop open-source foundations.

From a methodological standpoint, Prompt Spot aligns with modern UX and web engineering principles: responsive design for cross-device compatibility, seamless navigation flows, and performance optimization through server less deployment. It embraces collaborative knowledge curation, enabling users to benefit from collective creativity while also contributing back to the ecosystem.

Prompt Spot addresses the growing need for creative stimulus tools by combining AI-assisted content generation with social collaboration. Its potential applications span educational environments (idea generation for assignments), creative writing workshops, brainstorming sessions in professional teams, and on boarding activities in creative industries. By fostering a dynamic environment of prompt sharing and discovery, Prompt Spot contributes significantly to democratizing creativity and accelerating ideation across disciplines.

Made by- Simran Kaur Juneja (05118002722)
           Gautam Gupta   (08018002722)

Abstract 3 – Brainee: AI-Powered SaaS Platform

This project, titled Brainee, is a full-scale AI-powered SaaS application developed using the PERN stack—PostgreSQL, Express.js, React.js, and Node.js—designed to provide a suite of productivity-enhancing AI tools. The platform integrates secure authentication, role-based access control, and subscription billing via Clerk and Stripe, supported by a serverless PostgreSQL database hosted on Neon for high scalability and performance.

Brainee offers multiple AI-driven utilities, including:
- Image Generator: Converts textual prompts into AI-generated visuals.
- Code Generator: Produces functional code snippets based on user instructions.
- Chatbot: Delivers conversational AI capabilities similar to ChatGPT.
- Text Summarizer: Condenses lengthy documents into concise summaries.
- Voice Decoder: Accurately converts audio into text.

The methodology emphasizes modular architecture, enabling each AI tool to function independently while remaining integrated into a unified SaaS platform. The backend, built on Node.js and Express, ensures robust API handling, while the React-based frontend delivers a responsive and intuitive interface. The application design prioritizes security, scalability, and extensibility, making it suitable for both individual and enterprise use cases.

This project demonstrates the fusion of scalable cloud infrastructure with advanced AI services, presenting a viable model for real-world SaaS deployment. Potential applications include digital productivity platforms, creative content generation tools, and enterprise AI solutions. Brainee exemplifies how modern full-stack development can be leveraged to create versatile, subscription-based AI platforms.

Made by- Simran Kaur Juneja (05118002722)
           Gautam Gupta   (08018002722)