Harshal Ranjhani

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Education

Vellore Institute of Technology   Sept 2021 – May 2025
Bachelor of Technology in Computer Science with specialization in IOT (CGPA: 9.24 / 10.00)   *Vellore, India*
- **Relevant Achievements:** Projects Lead at IET-VIT, YANTRA Hack-Track Winner, WomenTechies'22 Best Freshers

Experience

S20.ai   Sept 2024 – Jun 2025
Software Engineering Intern   *Remote*
- Enhanced data download speeds in the Copilot.Camera React Native app by implementing pagination and integrating SQLite for local storage, significantly boosting performance and improving user responsiveness.
- Built and synchronized a fully functional calendar feature in the studio platform using Next.js, enabling real-time integration with Google Calendar for streamlined scheduling and enhanced user productivity.
- Developed Copilot.Feeds end-to-end — an AI-powered video processing pipeline that ingests RTSP video feeds, identifies relevant segments using a Large Vision-Language Model (VLM), and dispatches real-time alerts and notifications to users.

Hypersift.ai   Dec 2024 – Mar 2025
Backend Developer   *Remote*
- Developed and optimized backend infrastructure using AWS services, implementing strategic CDN solutions that significantly improved application load times and enhanced user experience.
- Designed and deployed scalable video conversion pipelines on AWS, leveraging services like Lambda and S3 to automate and streamline media processing workflows, ensuring fast, reliable, and cost-efficient video delivery across the platform.
- Integrated face-api.js technology to implement advanced anti-cheating detection systems during interviews, enhancing the integrity and reliability of the recruitment process.

Soundverse.ai   Jun 2023 – Jan 2024
Full Stack Developer   *Remote*
- Developed Soundverse.ai's studio and SaaS platforms with Next.js, React.js, and MongoDB, enhancing content delivery and engagement for 20,000+ users and enabling the generation of over 50,000 audios.
- Built a high-performance audio processing pipeline using Google Cloud and FFmpeg, facilitating advanced online editing features and a user-generated audio library for customizable configurations.
- Integrated Google Cloud Platform for system optimization, achieving significant improvements in performance and scalability.

Projects

Genie | *Golang, Cobra, Homebrew*
- Developed Genie, an AI-powered CLI tool designed to assist beginners in learning CLI commands and functioning as a personal assistant, resulting in a significant increase in user learning efficiency.
- Implemented multi-functional features including music generation, command execution, image generation, text-to-text responses and code documentation significantly enhancing overall user interaction and productivity.

EmGen | *Face-api.js, Tensorflow.js, Next.js, Google Cloud Platform*
- Built EmGen, a web application that uses face-api.js and Tensorflow.js to generate personalized music based on real-time emotion detection from user facial expressions and additional mood context.
- Integrated Facebook's MusicGen model with Google Cloud Platform for hosting and storage, creating an innovative emotion-to-music pipeline that delivers contextually relevant audio experiences.

Technical Skills

Languages: Typescript, Javascript, Go, Java, C, C++, Python, Bash
Technologies: Next.js, React.js, Express.js, Node.js, MongoDB, PostgreSQL, Redux, Cobra, Svelte, Github Actions, Ffmpeg, Google Cloud Platform, Amazon Web Services, Supabase, FastAPI, RAG, LLMs, Cloudflare
Concepts: Rest API, CDNs, Database Normalization, Git, CI/CD, DevOps, Agile Methodology, Cloud Computing, Operating Systems, System Design