

ABHISHEK SANKAR

Pittsburgh, PA

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EDUCATION

Carnegie Mellon University • Pittsburgh • PA Anticipated graduation - 05/26
Master of Science • *Artificial Intelligence and Innovation* • GPA: 4.0

College of Engineering Trivandrum • Trivandrum • India Graduated - 07/21
Bachelor of Technology • *Computer Science & Engg.* • GPA: 9.0

SKILLS

Skills Python, Java, JavaScript, C++, PyTorch, SQL, React, Redux, Next.js, TypeScript, Azure, HTML, CSS, Mixpanel

WORK EXPERIENCE

Providence Global LLP – Software Engineer 2 **August 2021 – July 2024**
Hyderabad, India

- Designed and implemented client-side analytics for trusana.com with A/B testing, Mixpanel integration, and user cohort analysis, driving a **9% boost in conversion rates over 4 months**.
- Optimized website load time from 12 seconds to P99 under 3 seconds using GZIP compression, webpack bundle optimization, and React lazy loading, **reducing user dropoff rates by 40%**
- Built a pipeline for de-identification and summarizing/**generating** patient responses/**charting notes** using **fine tuned local models** (LLaMa-7B)
- Delivered a Trusana landing page within 2 weeks, ensuring **WCAG 2.0 AA compliance** with tools like ARIA landmarks and keyboard navigation, screen reader support.
- **Led a team of 3 engineers** to develop a platform from scratch to support hospital front-line workers, reducing workload-related burnout incidents by 15%.
- Delivered a healthcare platform from scratch to **MVP within 2 months and to full production in another 3 months**, providing real-time support for over 500 caregivers.
- **Promoted in 1.5 years for leading delivery of key MVPs**, including an E2E video calling feature and an iOS app, showcasing rapid learning and cross-functional impact.

PROJECTS

LoRA implementation (Python, Pytorch) **November 2024**

- This notebook was a small project to understand LoRA finetuning. It implements LoRA from scratch primarily using [the paper](#) as a guide.
- I could achieve 97.9% of the performance of normal finetuning with as little as 7.7% of the trainable weights compared to the traditional approach.

Accessibility - enabled by LVM (Python, Pytorch) **October 2024**

- Designing an accessibility enhancement app that leverages large vision models (e.g., GPT-4V) to provide screen-reader compatibility and voice-controlled navigation for websites lacking built-in accessibility.
- Employing Claude APIs and GPT-4 voice models to optimize real-time user interaction workflows for accessibility, focusing on seamless action execution and user adaptability.

RAG pipeline for library specific docs (Python, Pytorch, Pinecone) **September 2024**

- Developed a RAG based interface for library documentation which doesn't exist in training data for gpt models.
- Scraped docs, converted them to md with firecrawl, chunked the data and setup a pipeline for MIPS to surface relevant chunks, on pinecone.

Image Diffusion model (Python, Pytorch) **August 2024**

- Built a diffusion model using a custom UNet architecture and PyTorch to create denoised abstract images, utilized as thematic visuals for blog posts on [my website](#), showcasing proficiency in generative AI techniques.

Pittsburgh 2 Peers - Live Demo / Recorded Demo (React, .NET, Vercel) **June 2024**

- Developed a React/.NET-based community app for CMU students, facilitating rideshare and bulk purchasing coordination, achieving 500+ active users within 3 months.
- Conducted requirements analysis, market research, and UX studies using tools like Figma, leading to the successful deployment of a community engagement platform.

ACHIEVEMENTS

Awarded the **IEEE Richard E. Merwin Scholarship**, recognizing global excellence in academics and volunteering as one of only 16 recipients worldwide.

Won the **Nucleate Pittsburgh Biotech Hackathon** out of 200 participants by designing a real-time feedback system for ENT surgeons, leveraging machine learning to enhance cochlear implant success rates.

Runner Up, Reboot Kerala | Healthcare Category, out of 30+ State level finalists, for designing a private WebRTC based E2E therapy scheduling solution.

Achieved a top 10% ranking (Rank 296 of 3000+) in the IEEE Xtreme 2020 global competitive coding challenge.

NTSE Scholar - One of 1000 students selected annually at the national level for academic excellence.