Sainath Ganesh

Software Engineer · Masters CS, UIUC
sainathganesh1@gmail.com · San Francisco, Bay Area, CA · Portfolio · LinkedIn · Github

PROFESSIONAL EXPERIENCE

5+ YOE - 2 FTEs | 2 Research | 3 Internships

Software Engineer **May 2023 - Present**
Magic Leap - Google Partnership

- Shipped a production ready XR pipeline for Google **Immersive Capture** App, integrating with Google backend services facilitating training of **Gaussian Splats** and **NeRF**
- Built a **Gemini** powered calibration tool for 3D content on **Google Maps** - Accelerating QA validation by **10x** by cutting QA cycles from days to hours.
- Led end-to-end Out of Box Experience for the **Magic Leap 2**, collaborating cross-functionally with UX, Product and SW

XR Researcher | Masters CS **Aug 2022 - Dec 2023**
University of Illinois, Urbana Champaign

- Optimized **upstream video** pipelines using **Gaze-tracked foveation,** reducing bandwidth by **70%** - Enabling improved ML inferencing result quality on edge and constrained networks.
- Designed a real-time rendering pipeline for ILLIXR for **3D mesh reconstruction** - streaming vertex colored meshes over **WebSockets** via **Protobuf**, optimizing serialization and transfer overheads
- Developed **network synchronized** XR experiences for HXRI Lab, to study how immersive environments support cognitive and behavioral health outcomes in senior populations

ACHIEVEMENTS

- **20x** Hackathon Winner – Consistent top finishes in national and international coding competitions.
- Commended by **Prime Minister of India** (2021) – for my innovative projects leveraging VR + AI
- 1st Place, **UC Berkeley LLM Agents** Hackathon (2025) – **Smooth Operator** selected best Agentic AI project among 1100+ universities & 800+ companies
- Hooglee Hackathon Winner (2025) – Recognized by industry leaders **Eric Schmidt** and **Sebastian Thrun** for innovation in AI for Content creation.
- NVIDIA **Research Grant** (2020) – Awarded for COVID AR Hackathon.
- AI Thought Leadership – Delivered **Lightning talks** on Agentic AI at **UC Berkeley**.

RESEARCH & PROJECTS

- Smooth Operator (2025) - **Multi-Agent Conversational AI** system designed to streamline home moving process. Orchestrated multi agent system via Langchain and GPT Realtime (via Twilio) - automating conversations with moving companies, negotiating for the best quotes saving users **$500 - $2,000** per move and reclaiming 3 - 5 hours of manual effort.
- Accelerated Facial Recognition Pipeline (2023) – Improved Facial encoding search speed by **15x**, integrating classical computer vision filtering via **KD-Trees** as a preprocessing step to deep convolutional neural networks, drastically reducing compute and improving end-to-end processing by **250%**.
- Real-Time **ADAS** for Level-2 Autonomy (2021) – Designed and implemented lane keep assist, pre-collision warning and avoidance, adaptive cruise control and other advanced driver-assistance features, enabling partial vehicle autonomy with cameras + ML fusion only.
- Application of **Neuroevolution** for Autonomous Cars – Springer LNEE Springer (2020) – Published research on applying evolutionary algorithms to optimize neural networks for self-driving applications on simulated environements.

EDUCATION

Master of Computer Science, 2023
University of Illinois, Urbana Champaign
GPA - 4.0

B.Tech in Computer Science, 2021
Vellore Institute of Technology
Major GPA - 3.7

SKILLS

Technologies
XR (AR/VR), Full Stack, Cross Platform Apps, Agentic & Voice AI, Computer Vision, Autonomous Driving,

Languages & Frameworks
Python, JavaScript (TS), C#, C++, Java, AR Core / Kit, React, Unity, Unreal, Langchain, OpenCV, FastAPI