ASHWITH ANANDA POOJARY

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LinkedIn | GitHub | Portfolio

EDUCATION

Master of Science in Robotics and Autonomous Systems (Artificial Intelligence) May 2026
Arizona State University, Arizona, US CGPA: 4.0/4.0

Bachelor of Engineering in Information Technology May 2022
University of Mumbai, Maharashtra, IN CGPA: 9.46/10.0

SKILLS

Python, Android Development, Asynchronous Programming, Data Persistence, State Management, Kotlin Coroutines, Version Control, Figma, PostgreSQL, TensorFlow, PyTorch, CUDA, LangChain, Computer Vision, Deep Learning, Natural Language Processing, Statistical Modeling, Generative Decoding, Model Fine-Tuning, Transfer Learning, Embedded Systems, MQTT

EXPERIENCE

iMPACT Lab, ASU, AZ, US - Research Aide January 2025 - Present

- Engineered vision-language model (VLM) pipelines for fundus image interpretation, leveraging grounding techniques to enhance spatial reasoning and feature attribution using LangChain.
- Fine-tuned multimodal VLMs, including CogVLM, LLaVA-Med v1.6, GroundingDINO, and MoLMo, for five-class diabetic retinopathy classification, optimizing generative decoding parameters to **improve diagnostic accuracy by 12.4%**.
- **Parallelized inference on 50,000+ fundus images** across three GPUs using CUDA and PyTorch, reducing computational overhead and improving throughput by 15%.

Jio Platforms Limited, MH, IN - Mobile App Developer | Software Engineer July 2022 - July 2024

- Improved MyJio app performance by **30% using Jetpack Compose** with stable and immutable data classes and crafted sophisticated UIs leveraging advanced techniques, earning Star Performer recognition within a year.
- **Led a 10-member team** to build a fintech app from scratch using React Native; **developed in-house libraries, saving $200k/year**; automated XML to TypeScript conversion, saving a week of manual effort.
- Mentored five associate engineers and **conducted technical sessions for 15+ engineers** on advanced Android optimization techniques in Jetpack Compose animations and local database management using Kotlin.

AU Small Finance Bank, KA, IN (Remote) **-** Machine Learning Engineer | Intern May 2021 - December 2021

- Devised a machine learning model exceeding **90% precision** for customer loan eligibility prediction, increasing marketing targeting efficiency and reducing resource wastage by 25%.
- Conducted **Exploratory Data Analysis using Polars on 500k+ customer records**, applying data mining techniques, reducing data inconsistencies and improving regression model accuracy.
- Authored a business-focused report detailing the model's applications, enabling data-driven decisions that optimized loan approval processes and **enhanced campaign outcomes**.

PROJECT

LLM Based Auto-Aiming and Tracking System

- Developed a lightweight object recognition pipeline that enabled prompt-based target selection, achieving < 300ms response latency.
- Calibrated servo response based on pixel-space-to-angle transformation and implemented compensation logic to minimize overshoot under limited 45° camera FOV; achieved sub-2° targeting accuracy.
- Built a browser-based UI with live MJPEG streaming and manual trigger override; ensured reliable ESP32 synchronization through custom UART-MQTT bridging and adaptive debounce logic.

RESEARCH

Hegde, Gayatri; **Poojary, Ashwith**; Radhakrishnan, Ritika; Variar, Manasi. 2022. Indian Sign Language Translation for Hard-of-Hearing and Hard-of-Speaking Community. In IRJET Journal, Volume: 09, Issue: 04, April 2022.

Bhaskarwar, Utkaarsh; **Poojary, Ashwith**; Variar, Manasi. 2021. Machine Learning Approach to Predict the Trends of the COVID-19 Pandemic: A Survey. In IRJET Journal, Volume: 08, Issue: 06, June 2021.

Banerjee, Ayan; **Poojary, Ashwith**; Thakur, Kuntal; Shaikh, Farhat; Urooj, Midhat. Domain Generalization through Knowledge Imputation: A Medical Imaging Case Study. Ongoing (NeurIPS 2025).

Banerjee, Ayan; Gupta Sandeep; **Poojary, Ashwith**; Thakur, Kuntal; Shaikh, Farhat; Urooj, Midhat. MedXAI: A Retrieval-Augmented and Self-Verifying Framework for Knowledge-Guided Medical Image Analysis. Ongoing (EMNLP 2025).