Dhruv Dange

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EDUCATION

Carnegie Mellon University — Pittsburgh, PA
Master of Science in Robotics — August 2027
Current Courses: Computer Vision, Math Fundamentals for Robotics

Ramaiah Institute of Technology (RIT) — Bengaluru, India
Bachelor of Engineering in Information Science and Engineering — July 2024
GPA: 9.27/10.00

SKILLS

Softwares and Frameworks: Robot Operating System (ROS), PyTorch, OpenCV, Docker, Fusion360, Node.js
Programming Languages: Advanced- Python; Intermediate- C, C++, JavaScript; Basic- Java
Languages (Spoken): English, Hindi, Kannada

WORK EXPERIENCE

Flux Auto — Bengaluru, India
Full Stack Engineer — January 2025 - July 2025
- Spearheaded development of an AI agent for automated Axxess medical form completion; collaborated with two senior engineers to create web and mobile application for medical note taking
- Created a chrome extension to parse and fill forms; implemented a pseudo-DOM representation, decreasing payload size by 90% during transmission; benchmarked and fine-tuned multiple Large Language Models to attain deterministic outputs
- Refined product based on customer feedback; executed one-click complete form filling feature and deployed application to market

Flux Auto — Bengaluru, India
Deep Learning Intern — June 2024 - December 2024
- Designed real-time perception algorithms for palette identification and obstacle detection; worked with TestOps team to test and optimise autonomous pallet jack operations in warehouse setting
- Constructed object recognition and tracking systems by performing keypoint detection and point cloud clustering, enhancing precision of autonomous forklifts

Unisys India — Bengaluru, India
Intern - Office of the CTO — July 2023 - January 2024
- Engineered a notary agent microservice for the Digital Bill of Materials project, enabling secure attestation sharing across five organizations; integrated Sigstore as notary provider; contributed 5 documentation updates to the sigstore project
- Leveraged Azure Blob Storage triggers to automate data ingestion, reducing latency by 40% and streamlining the management of 500,000+ records monthly for improved operational efficiency

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PROJECTS

Real-Time Image and Video Dehazing Algorithm - RIT, Capstone Project — January 2024 - June 2024
- Devised an adaptive contrast-based dehazing algorithm accomplishing 30ms per image and 10ms per video frame in a team of four
- Implemented a temporal coherence algorithm that utilizes radiance and edge-based detection, cutting-down frame processing time by 70% and ensuring artifact-free dehazing under varied lighting
- Published in I4C 2024: "Adaptive Contrast Based Real-Time Image and Video Dehazing" (DOI 10.1109/I4C62240.2024.10748514)

Privacy Preserving Machine Learning using zk-SNARKS - RIT, Course Project — February 2023 - May 2023
- Developed a privacy-preserving machine learning framework combining homomorphic encryption and zk-SNARKs to validate computations without exposing sensitive data in a team of four
- Designed and optimized CNNs in PyTorch leveraging the Zama protocol to enable computation over fully homomorphic encrypted (FHE) datasets; achieved 95% accuracy on MNIST Dataset recognition tasks

Assistive Device for the Visually Impaired - IEEE CIS, Bengaluru, India — April 2022 - September 2022
- Engineered a low-cost wearable device for visually impaired with object detection, scene recognition and multilingual support for daily navigation and reading
- Programmed Text-to-Speech functionality by integrating OCR to detect and vocalize printed text; prototyped a 3D-printable housing for hardware using Fusion 360; deployed device for 100 students at the National Association for the Blind, Bengaluru, India

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LEADERSHIP

Lead: Google Developer Student Club - RIT Chapter, Bengaluru, India — June 2023 - June 2024
- Led a 15-member team in orchestrating campus events that fostered technical growth for a 1,200-member student community

CTO: Upchild Foundation – Bengaluru, India — April 2022 - December 2023
- Oversaw the development of the website; mentored junior developers in contributing to the platform's design and maintenance

Teaching Volunteer: Dream School Foundation – Bengaluru, India — April 2023 - May 2023