Sankalp Rajeev

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Education

University of Michigan – Dearborn Sep 2024 – Dec 2026
M.Sc., Artificial Intelligence & M.S.E., Robotics Engineering; GPA 3.90/4.00 *Dearborn, MI*

Arizona State University Aug 2020 – May 2024
B.S., Computer Science; Minor: Mathematical Concepts of Engineering GPA 3.71/4.00 *Tempe, AZ*

Work Experience

Zoetis May 2025 – Nov 2025
AI Micro Tools Developer Intern *Kalamazoo, MI*

- Engineered Streamlit micro-tools to automate and enhance SDLC documentation for a regulated GxP environment.
- Developed multi-stage ETL pipelines and integrated corporate LLM APIs for automated classification, trend analysis, and decision support across ServiceNow datasets.
- Architected and delivered a real-time analytics dashboard, including its custom SQL-backed data pipeline, to track tool adoption, accelerating documentation workflows and saving an estimated ∼1,000 engineer-hours annually.

Mistral Solutions Pvt Ltd Jun 2024 – Aug 2024
AI/ML Engineer Intern *Bangalore, India*

- Deployed and optimized YOLOv8 models on a resource-constrained Mistral EagleKit (Qualcomm QRB5165) to perform real-time object detection, enabling autonomous route monitoring for heavy-payload, high-altitude UAVs.
- Refactored Lua-based AHRS and obstacle avoidance logic; integrated Qualcomm SNPE SDK with mixed-precision quantization, cutting compute latency 25%.

Astroseed Aug 2023 – May 2024
Software Developer *Tempe, AZ*

- Led Agile sprints and backlog reprioritization, coordinating cross-functional collaboration across engineering teams.
- Architected the perception pipeline by integrating a 3D depth camera with a YOLOv5 model in ROS.
- Implemented SLAM-based autonomous navigation in Gazebo for path planning and obstacle avoidance.

Machani Robotics Jun 2022 – Aug 2022
Software Development Engineering Intern *Bangalore, India*

- Developed 6-DOF robotic-arm control software via CAN protocol for real-time motion planning.
- Built autonomous drawing task execution system with TDD, integrated with a ROS vision pipeline (Python/C++) and 3D depth camera for object recognition.

Projects

MeetingMind AI (Python, FastAPI, React, Docker, GCP) Dec 2025 – Jan 2026

- Architected a 5-phase ML pipeline orchestrating Whisper (ASR), Pyannote (diarization), YOLOv11 (face detection), and Gemini (LLM) to generate speaker-attributed meeting transcripts with automated summaries and action items.
- Integrated Gemini Vision (VLM) for multimodal slide/chart extraction, and engineered a speaker-face matching algorithm using IoU-based tracking with cosine similarity on 512-dim ArcFace embeddings.
- Deployed a RAG system (LangChain, ChromaDB, Vertex AI) with FastAPI backend and React frontend on Google Cloud Run via Docker containers.

Autonomous Driving Systems in CARLA (Python, PyTorch) Jan 2025 – Apr 2025

- Developed a real-time 3D trajectory mapping system by engineering a visual SLAM pipeline that fused stereo camera and IMU sensor data for localization and mapping.
- Implemented a PPO-based RL agent with CNN-encoded semantic features in a custom CARLA Gym environment, integrating YOLOv8 and UFLD for perception-driven lane adherence and obstacle avoidance.

Skills

Languages Python, C/C++, SQL, JavaScript, Java, Lua, MATLAB
Frameworks & Libraries PyTorch, TensorFlow, FastAPI, React, LangChain, HuggingFace, ROS, OpenCV, scikit-learn
Cloud/DevOps Docker, Git, GCP (Cloud Run, Vertex AI), Azure
Domains Generative AI, NLP, Computer Vision, Reinforcement Learning, Full-Stack Development, MLOps