Aryan Singh

SOFTWARE ENGINEER

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Engineer with a strong interest in technology, math and the applied sciences. I enjoy hard problems, creative solutions, and reading research to see what new possibilities are out there, and I like applying that to projects with real impact.

EXPERIENCE

Member of Technical Staff — Aug 2025 – Present

Mercor — San Francisco (Remote)

- Design and build reinforcement-learning environments (simulated apps, environments and evaluations) used to train and benchmark frontier AI models.
- Own the data layer that transforms raw seed data into realistic, consistent application state across environments.
- Develop verifiers and automated quality checks that catch environment defects before delivery.

Research Intern — Aug 2024 – Dec 2024

Indian Space Research Organisation — Bengaluru, India

- Satellite pose estimation: built an HRNet and AHRNet pipeline to estimate GSAT-12R's orientation (report), and deployed it on a Xilinx Versal VCK190 with custom quantisation scripts.
- Autonomous rover navigation: implemented RTAB-Map SLAM on a Firebird VI with a Luxonis OAK-D camera; designed a GUI and ran mapping experiments.
- Lidar-based pose estimation: analysed ICP and GICP on Blender datasets and captured point clouds with an Aeva lidar.

Backend Developer (part time) — Oct 2022 – Dec 2023

Mable.ai — Remote

- One of the founding developers on a B2B SaaS platform for marketing data accuracy and ad performance.
- Led backend projects targeting 30% efficiency improvements; migrated microservices from TypeScript to Go.
- Built cron jobs for data caching, archiving and deduplication, and a CI/CD pipeline for automated schema migrations.

Research Intern — Jun 2023 – Jul 2023

IIT Roorkee — Roorkee, India

- Led development of an IoT surface plasmon resonance image sensor for real-time parameter detection.
- Automated manual lab workflows and built a Python GUI for sensor calibration and data visualisation.

RESEARCH

An Effective Landmark Regression Using Attention-Based HRNet for Satellite Pose Estimation — 2024

Indian Space Research Organisation — Bengaluru, India

- Attention-based HRNet landmark regression for single-image satellite pose, solved with PnP and RANSAC.

PROJECTS

Smart Data Injector

Go · Python · MongoDB · AWS · Kestra

- Pipeline that automates mapping data between a source and a target schema; code on GitHub.

Fury

Go · Remix · MongoDB · AWS

- Recruitment portal for campus clubs with sign-up through college email.

EDUCATION

B.Tech, Computer Science and Engineering — 2021 – 2025

SRM Institute of Science and Technology — Chennai, India

SKILLS

Languages	Go, Python, TypeScript, Java, C
Backend & data	Node.js, PostgreSQL, MongoDB, Redis, AWS, Docker
ML & robotics	PyTorch, Computer Vision, SLAM, ROS, FPGA deployment