Adamya Singh

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Education

Rutgers University — New Brunswick, NJ
B.S. in Computer Science and Data Science | GPA: 3.6 — *Aug 2023 – May 2027*

- **Relevant Coursework:** Artificial Intelligence, Machine Learning, Deep Learning, Algorithms, Data Structures, Discrete Mathematics, Computer Architecture
- **Leadership & Activities:** USACS (CS Club) — Tech Team Lead & Executive Board Member, STAR (Space Technology Association at Rutgers)
- **Honors & Awards:** Winner, Verizon Smart Campus Challenge 2025 (AI-powered scheduling platform); Dean's List; Eagle Scout

Experience

Machine Learning Engineer Intern — Nov. 2025 – Present
Aviro (YC-backed enterprise AI agents platform) — *Remote*

- Worked on the **Enterprise Search Benchmark** (10 tasks) over a Docker-baked corpus of PDFs/PowerPoints/spreadsheets, backed by **PostgreSQL + pgvector** semantic search
- Implemented an **MCP-based RL environment** exposing `search`/`fetch`/`answer` tools with step budgeting, citation checks, and redaction-after-view memory constraints
- Trained **Qwen3-14B** with **GRPO** via (1) W&B serverless distillation from frontier-model trajectories and (2) local on-policy RL using **vLLM + LoRA** with hot-reloaded adapters

Software Engineer (MVP Development), Fusen Fellow — May 2025 – August 2025
rebootED (tryrebooted.com, backed by Fusen World Accelerator & Google for Startups) — *Atlanta, GA*

- Engineered an enterprise L&D MVP end-to-end: designed **Spring Boot + PostgreSQL** services with JWT auth and REST APIs, and a **Next.js + TypeScript** frontend with role-based dashboards and analytics
- Implemented AI-driven course generation pipelines
- Partnered with **15+ enterprise tech orgs** to validate requirements, harden multi-tenant architecture, and ship production-ready specs for large-scale deployments.

Undergraduate Research Assistant - Computer Vision — Jan. 2025 – Present
Rutgers University, Computer Science Department — *New Brunswick, NJ*

- Investigating vision-language model (VLM) failures in negation comprehension using **225K+ multimodal medical images** from the CheXpert dataset
- Benchmarked **3+ GenAI VLMs** (e.g., **CLIP, BioMedCLIP**) on negation-sensitive tasks using **PyTorch**; developed domain-specific evaluation tools to identify reasoning failures

Projects

SO-ARM-101 MuJoCo Simulation | *MuJoCo, Gymnasium, PyTorch, Transformers, RL*

- Built a MuJoCo + **Gymnasium** simulation environment for the SO-ARM-101 arm with multi-camera observations, normalized state/action interfaces, teleoperation, and shaped pick-and-place rewards
- Implemented **VLA policy inference** with adapters for **SmolVLA (450M)** and **Pi0 (3.3B)**, enabling model swapping via CLI flags and consistent action formatting
- Trained policies with **ReinFlow** using PPO-style objectives with exact log-probs; supported headless + parallel rollouts, checkpointing, and inference from trained policies

RU-Networking | *Next.js, OpenAI GPT-4o, Assistant API, RAG, PineconeDB*

- Built a full-stack AI-powered course planning assistant for **70,000+** Rutgers students using RAG, engineering function-calling workflows, tool orchestration, and Server-Sent Events to deliver **real-time, production-scale chat recommendations**.
- Reverse-engineered undocumented endpoints and developed a highly parallelized Python scraper to extract and clean a **1M+ line dataset**, powering a custom SQL-backed recommendation engine.

Technical Skills

Languages: Python, Java, C/C++, JavaScript, HTML, CSS, SQL, R, Bash
Frameworks / Tools: React, Node.js, Git, AWS S3, Ollama, Linux, Tableau, MongoDB
Libraries / ML: DSPy, HuggingFace, PyTorch, NLP, VLA, Computer Vision, Reinforcement Learning,