Raghav Singh

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EDUCATION

University of California Santa Cruz **Jun 2022 - Dec 2025**

Bachelors of Science, Computer Science

- **GPA:** 3.75/4.0
- **Coursework:** Distributed Systems, Networks, Machine Learning, Artificial Intelligence, Data Structures & Algorithms, Databases, Computer Architecture, System Design, Cybersecurity

EXPERIENCE

Scale AI **Jun 2025 - Present**

Gen AI Intern *San Francisco, CA*

- Contributed to advancing code reasoning in LLMs by fine-tuning and evaluating models on complex Python/C++/Java Olympiad-style problems, helping improve accuracy and performance in high-expectation (HE) reasoning tasks
- Designed and ran benchmarks to assess how well models handle advanced reasoning and edge cases, providing daily evaluations and key insights to support research and model development
- Improved model safety & reliability by uncovering jailbreak vulnerabilities through red-teaming efforts, and supported the optimization of AI training pipelines for better scalability and resource efficiency

Nutanix **Jan 2025 - Jun 2025**

Software Engineer Intern *San Jose, CA*

- Created a benchmarking tool to evaluate LLM performance on CPUs, helping Nutanix compare models across different hardware setups, the tool will guide future decisions on when and how to deploy specific models for maximum efficiency
- Built a containerized platform using Docker Compose and FastAPI, setting up a distributed system to run benchmarks smoothly across both client machines and virtual environments
- Integrated monitoring tools like Node Exporter, Intel PCM Exporter, Prometheus, and Grafana to track system performance in real time
- Developed a user-friendly Streamlit frontend for configuring benchmarks and visualizing results, backed by a structured SQLite database, leading to $50K+ in potential cost savings through better resource allocation and easier system debugging

Tech4Good Lab @ UCSC **Dec 2023 - Mar 2025**

Software Developer - Lead Causeway Dev @ UCSC *Santa Cruz, CA*

- Led the development of 25+ responsive UI widgets and dynamic web pages using TypeScript, React (JSX), Node.js, Flask, MongoDB, and Angular (NgRx, RxJS), enhancing platform scalability and improving accessibility for learners and nonprofit partners
- Designed and prototyped interactive components in Figma, conducted UX research and user testing, increasing user interactivity and engagement by effectively addressing educational gaps present in traditional coding tutorials
- Implemented state management with Angular NgRx and Firebase for real-time data synchronization, enabling experiential learning and measurable community impact through micro-role hierarchies

PROJECTS

RankPath **Feb 2025 - Present**

- Developing an AI-powered university rank prediction tool that uses linear regression with Scikit-learn to analyze historical exam and admission data, helping students estimate which universities they are likely to get into based on their exam results
- Aiming to assist over 2.5 million students annually, RankPath aims to simplify and personalize the admission process by offering accurate, data-driven university recommendations

CircleRush **Sep 2024 - Dec 2024**

- Developed a social productivity app that helps users stay accountable by creating Circles, setting goals, and tracking tasks in real time, using Firebase for smooth authentication and data management
- Implemented key features including task ranking, peer validation, and a point-based leaderboard system to drive engagement, while integrating real-time chat and notifications to enhance collaboration and user retention

Multi-Threaded Server **Mar 2024 - Jun 2024**

- Multiple Threading Server in C takes n threads requests. Uses queue data structure and a read-write lock to ensure synchronization. Achieved 100+ requests/sec and 50ms Latency

TECHNICAL SKILLS

- **Languages**: Python, JavaScript, C/C++, RISC-V, TypeScript, HTML, CSS, SQL, Apache Spark
- **Frameworks**: Angular, React, Node.js, Express.js, Expo, Next.js
- **Libraries**: Flask, Django, Pandas, NumPy, Scikit-learn, TensorFlow, Bootstrap, Matplotlib
- **Developer Tools**: Git, AWS, Docker, Kubernetes, MySQL, PostgreSQL, Linux/Unix, Figma
- **Concepts**: Object Oriented Programming, APIs, Embedded Systems, Rest APIs, JSON