

Akshay Rao

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EDUCATION

Master of Science in Computer Science

Sep 2022 – Dec 2024

Northeastern University

Seattle, WA

- GPA: 3.96/4.0
- Relevant Coursework: Object-Oriented Design, Algorithms and Computational Complexity, Web Development, Computer Networking, Distributed Systems, Parallel Data Processing, Advanced Software Development

Bachelor of Science in Biochemistry

Jan 2017 – Jun 2021

University of Washington

Seattle, WA

- Relevant Coursework: Data Science, Differential Equations, Linear Algebra, Statistics, Database Systems

EXPERIENCE

Software Engineer Intern

May 2024 – Sep 2024

JustPerform

Remote

- Built a RESTful chatbot with Python, BeautifulSoup, and FastAPI to deliver real-time FAQ responses.
- Designed a responsive front-end with Vue.js, improving resource accessibility and user satisfaction.
- Built analytics framework and documented workflows to prepare chatbot for deployment.

Software Developer

Jan 2022 – Sep 2022

Yara International

Singapore

- Developed scalable microservices with TypeScript and Kubernetes, enhancing cross-team collaboration.
- Implemented tenant management using Auth0, providing other teams with secure tenants to build platforms.
- Built standardized React login components, improving team alignment and accelerating development cycles.

Teaching Assistant

Jan 2023 – Dec 2024

Northeastern University

Seattle, WA

- Assisted in Object-Oriented Design and Computer Systems based on faculty recommendation.
- Guided 30+ students per semester by clarifying concepts, providing feedback, and coordinating with professors.

LEADERSHIP EXPERIENCE

National Service

Feb 2015 – Feb 2017

Singapore Police Force

Singapore

- Completed mandatory 2-year National Service as part of Singapore citizen obligation.
- Developed strong leadership principles through team ownership and responsibility in high-stress environments.

PROJECTS

Distributed Album Store | *Java, Golang, MySQL, DynamoDB, RabbitMQ, AWS*

- Built a scalable album store service managing 600,000+ entries with multithreaded request handling.
- Increased throughput from 1,134 to 2,913 requests/sec via load balancing across three servers.
- Integrated RabbitMQ to handle like/dislike events, ensuring a 99th percentile response time of 72 ms.

CI Engine | *Python, Poetry, Click, Docker, MongoDB, YAML, AWS*

- Developed a modular CI engine for automating pipeline execution and managing repositories.
- Published the CI engine on PyPI, enabling developers to integrate it into their workflows effortlessly.

Task Scheduler | *C++, File I/O*

- Simulated MAS and SRTF algorithms to evaluate task prioritization trade-offs.
- Analyzed termination/waiting times to determine optimal scheduling strategies and insight into kernel scheduling.

TECHNICAL SKILLS

Programming Languages: Java, Python, C++, TypeScript, Golang, SQL, HTML, CSS, YAML

Tools/Frameworks: Node.js, React, Vue.js, FastAPI, Docker, Kubernetes, CircleCI, Jenkins, RabbitMQ, Spark

Database Management Systems: MySQL, PostgreSQL, MongoDB, DynamoDB, Redis, Hive, HBase