

Akshay Rao

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TECHNICAL SKILLS

Programming Languages: Java, Python, C++, TypeScript, Golang, SQL, HTML, CSS, YAML
Tools/Frameworks: Node.js, React, Vue.js, FastAPI, Docker, Kubernetes, CircleCI, RabbitMQ, Spark
Database Management Systems: MySQL, PostgreSQL, MongoDB, DynamoDB, Redis, Hive, HBase

EXPERIENCE

Software Engineer Intern May 2024 – Sep 2024
JustPerform - Cloud-Native Financial Platform Remote

- Developed a RESTful chatbot to streamline FAQs, reducing user query response times and improving accessibility.
- Implemented a responsive front-end using Vue.js, improving usability and resource access for 10,000+ users.
- Built data validation pipelines using Pydantic, ensuring accurate financial workflows and enabling audit readiness.
- Automated financial data validation with AWS Lambda, enabling real-time processing of 1,000+ records daily.

Software Engineer Jan 2022 – Sep 2022
Yara International - Digital Agricultural Solutions Singapore

- Deployed scalable microservices for digital farming tools, enabling farmers to boost yields globally.
- Streamlined tenant management with Auth0, ensuring secure platform-building across 12 cross-functional teams.
- Designed React-based login components for internal teams, accelerating development timelines by 30%.
- Automated RBAC workflows across 20+ countries, resolving access based on regional infrastructure constraints.

Teaching Assistant Jan 2023 – Dec 2024
Northeastern University Seattle, WA

- Recommended by faculty to support teaching in Object-Oriented Design and Computer Systems.
- Guided 30+ students per semester by clarifying concepts and providing feedback to fulfill learning outcomes.

PROJECTS

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

- Built a scalable album store service managing 600,000+ entries with multi-threaded 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 | *CLI, Click, Python, Poetry, Docker, MongoDB, YAML, AWS*

- Developed a modular continuous integrated 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 kernel algorithms to evaluate task prioritization and trade-offs.
- Analyzed termination/waiting times to determine optimal scheduling strategies and insight into kernel scheduling.

EDUCATION

Master of Science in Computer Science Sep 2022 – Dec 2024
Northeastern University Seattle, WA

Bachelor of Science in Biochemistry Jan 2017 – Jun 2021
University of Washington Seattle, WA

LEADERSHIP EXPERIENCE

Medical Review Staff Assistant (CPL) Feb 2015 – Feb 2017
Singapore Police Force Singapore

- Completed mandatory 2-year National Service as part of Singapore citizen obligation.
- Ensured accurate medical grade assignments for 150,000 servicemen, critical for proper duty deployments.
- Communicated medical results to authorities, demonstrating conflict resolution and strong interpersonal skills.