

Salim Mohamed

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EDUCATION

Oregon State University

Bachelor of Science in Computer Science, Focus in Machine Learning & AI

Corvallis, OR

Sep 2022 – Present

EXPERIENCE

Software Engineering Intern

Sep. 2023 – June 2024

Avaza Language Services

Co-op

- Wrote high-quality, secure Python, C++, and Java code focused on design, maintainability, and performance for client-facing applications
- Built automated test suites using PyTest and JUnit to verify correctness and ensure reliability across 15+ deployed features
- Designed algorithms and optimized data structures to handle 500+ monthly data processing tasks, reducing latency and improving scalability
- Collaborated with cross-functional teams using Git, GitHub Actions, and CI/CD pipelines for source control and deployment
- Debugged critical issues using stack traces, memory profiling, and code tracing tools, ensuring reliability and minimizing downtime
- Delivered customer-focused solutions that improved transaction processing and data accuracy for 200+ daily users

PROJECTS

DMA Memory Analysis | C++, System Architecture, Memory Analysis, Cybersecurity

April 2025 – Present

- Engineered a high-performance C++ application leveraging Direct Memory Access (DMA) to analyze processes securely in real time
- Applied advanced debugging and memory tracing techniques to achieve 99%+ accuracy in process detection
- Pioneered integration of PCILeech and MemProcFS libraries, creating 65+ automated test cases that improved code coverage by 15% and ensured accuracy in sensitive environments, surpassing expectations from senior engineers
- Delivered reliable, scalable system components designed around data structures for efficient memory inspection

Foresight: Trading Insights | Python, Next.js, TypeScript, Financial APIs

July 2025 – Present

- Built a secure, reliable full-stack trading dashboard with automated alert systems and real-time data analysis
- Designed a REST API in Flask with 12+ endpoints, integrating financial data sources, tested with automated unit and integration tests
- Created a scalable Next.js frontend in JavaScript/TypeScript, using Git for source control and Docker for deployment
- Debugged API latency and performance bottlenecks using profiling tools, ensuring resilience and fault tolerance for 50+ concurrent users

Log Analysis Parser | Python, Data Analysis, Automation, Git

May 2025 – Present

- Designed parser to convert 10,000+ unstructured log lines into structured CSV reports using algorithms and OOP design
- Built modular, testable components with unit tests and automated CI/CD deployment for data integrity

TECHNICAL SKILLS

Programming Languages: Java, Python, C++, C#, JavaScript, TypeScript, SQL (Postgres), R, HTML, CSS

Core Competencies: Algorithms, Data Structures, Software Design, Object-Oriented Programming, Automated Testing, Debugging, Memory Profiling, Code Tracing, Performance Optimization, Secure Coding Practices

Frameworks & Libraries: React, Next.js, Node.js, Flask, Django, .NET, Discord.py, NumPy, Matplotlib, Tailwind CSS, Supabase

Developer Tools: Git, GitHub, GitLab, Docker, Kubernetes, Google Cloud Platform, VS Code, IntelliJ, PyCharm, Visual Studio, Jira, CI/CD Pipelines

Security & Reliability: Penetration Testing, Secure Software Development, Reliability Engineering, Error Handling, Exception Management, Test-Driven Development

Deployment & Infrastructure: Source Control Management, Automated Deployment, Task Management Tools, Cloud-Based Hosting, API Development, RESTful Services