

Abhi Sachdev

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Experience

Amazon Web Services	Vancouver, BC
Software Development Engineer II	July 2024 - Present
Software Development Engineer I	March 2023 - July 2024
<ul style="list-style-type: none">Designed and implemented concurrency control for idle clients in S3 Express One Zone, improving resilience to connection exhaustion (slowloris) attacks and enabling 10x higher concurrency on PUT while maintaining 99.99% availabilityImplemented OneBox test environments across 5 S3 Express services, enabling pre-production validation that has prevented production outages since adoption, boosting deployment safety and reliabilityLed the qualification of Graviton instances for S3 Express's storage service, making necessary changes to CI pipelines and infrastructure packages to support multiple architectures, improving server-side latencies by 30%Optimized shard container placement engine with multi-threading to accelerate S3 Express scaling, improving provisioning speed by 10x to support expansion of total storage capacityEnabling team success by onboarding 8+ new engineers, hosting knowledge sharing sessions, mentoring an SDE 1 in career growth, and driving key projects by providing technical guidance to engineers and TPMs	
Amazon Web Services	Vancouver, BC
Software Development Engineer Intern	May 2022 - Aug 2022
<ul style="list-style-type: none">Engineered a profiling tool for Rust services with under 3% CPU overhead to continuously monitor and visualize CPU usage as flamegraphs, enabling operators to quickly identify and resolve performance regressionsDeveloped an aggregator daemon to batch and compress profiling data from multiple input formats into a unified output type before uploading to S3, reducing network usage by 30x by emitting consolidated reports	
Google	Mountain View, CA
Software Developer Intern	Aug 2021 - Dec 2021
<ul style="list-style-type: none">Developed a C++ backend service to visualize geometry emitted from Google Maps feature layers, enabling the team of 20+ engineers to efficiently debug and validate new map layers during feature developmentAdded support for visualizing static route layers (e.g., highways) in the service, enabling engineers to test route data surfaced during map searches	
Amazon Web Services	Vancouver, BC
Software Development Engineer Intern	May 2021 - Aug 2021
<ul style="list-style-type: none">Built a Rust-based shard corruption detection tool for S3's distributed storage system, reducing worst-case IOPS from $O(N!)$ in legacy tools to $O(N)$ by adding caches, minimizing load on storage nodes and improving operational efficiencyLeveraged property-based testing frameworks to develop robust unit, integration, and end-to-end test suites, achieving 100% code coverage and guaranteeing zero false negatives in corruption detection	
Librestream	Winnipeg, MB
Software Developer Co-op	Sept 2020 - Dec 2020
<ul style="list-style-type: none">Integrated real-time object detection into Librestream's Android and iOS video streaming apps, enabling identification of machine components and increasing workforce productivity for industrial users across 130+ countries	
iQmetrix	Winnipeg, MB
Software Developer Co-op	Jan 2020 - Apr 2020
<ul style="list-style-type: none">Enhanced performance test suite for backend APIs serving 300,000+ users by extending JMeter load tests with new workloads, identifying bottlenecks and improving system resiliency under peak load	

Skills

Languages: Rust, C/C++, Python, Java, C#, JavaScript, SQL, Bash

Technologies: AWS, Tokio, Axum, OpenGL, ASP.NET, Express.js, Docker

Education

University of Manitoba	Winnipeg, MB
Bachelor of Computer Science Honors (Co-op) GPA: 4.3/4.5	Graduation: Feb 2023
<ul style="list-style-type: none">Teaching Assistant: Distributed ComputingExtracurricular: VP of Student Affairs at UM Computer Science Students' Association	