

Alyssa Carter-Ngo

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Profile

Infrastructure engineer with a deep understanding of how systems scale, break, and recover, especially in environments where reliability and developer velocity are both non-negotiable. I've built and operated core networking services at AWS, including secure key infrastructure and CI/CD pipelines that ship changes safely across classified and production partitions. I've also introduced AI-assisted tooling into live ops, helping reduce manual toil and improve system visibility.

Work Experience

06/2023 — PRESENT SEATTLE, WA

Software Engineer Amazon Web Services

- Developed and maintained a distribution-plane service responsible for constructing and distributing the guest network configurations that power VPC.
- Developed a new CI/CD pipeline that dramatically improved reliability and speed of changes to some of our infrastructure.
- Optimized the VPC networking architecture to better accommodate new AI workloads.
- Architected the services responsible for management of keys for on-the-wire encryption for all encryption-capable instance types.
- Managed the above in multiple high-side classified partitions for multiple government partners around the globe.
- Mitigated operational issues for all of the above on a 24/7 week-long rotation.
- Wrote a custom MCP server and indexed 30,000 documents to allow AI agents to assist in operations by directly interfacing with the hosts.
- Intern mentor.

05/2022 — 08/2022 SEATTLE, WA

Software Engineer (Intern) Amazon Web Services

- Interned at AWS BigMac, a hyperscale data plane service that powers NAT Gateway, NLB, and AWS service endpoints and many other AWS services
- Developed a CDK-based testing framework for integration testing key nonstandard network topologies
- Architected custom CloudFormation resources with Lambda handlers to manage AWS-internal components that lacked native CloudFormation support

Work Experience

2020 — 2022 DALLAS, TX

Chief Technical Officer Mintere

- Collaborated directly with clients and product teams to design and develop tailored web solutions, ensuring that each project met specific client needs and expectations.
- Led multiple rounds of design, development, and review on web deliverables to guarantee client satisfaction.
- Managed subcontractors on client projects, optimizing team performance and ensuring that deliverables were met on time and within budget.
- Primarily used Next.js for client projects.

Hobbies



Playing with my cat



Tinkering at home



Reading



Exploring my city like a tourist

Skills

Distributed Systems
Full-Stack Web Development
CI/CD Workflows
Operations

Education

2019 — 2023 DALLAS, TX

Computer Science | BSc University of Texas at Dallas

- Co-founded a digital marketing company while pursuing my studies, which enhanced my practical skills in managing projects and collaborating with peers.