

Noah Tajalli

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EDUCATION

University of Maryland, College Park

Bachelor of Science in Computer Science, Minor in Statistics

- GPA: 3.8

College Park, MD

May 2025

WORK EXPERIENCE

Amazon Web Services (AWS)

Arlington, VA

Software Development Engineer, EC2 Networking/VPC Control Plane

June 2025 - Present

- Core infrastructure team owning the system-of-record for EC2 network interface lifecycle, IP management, and instance-launch networking — every EC2 launch, ENI attachment, Elastic IP, and Load Balancing operation in AWS transits this service across 40+ regions
- Architected a cell-based sharding migration for this control plane serving every availability zone across **40+ AWS regions**, designing deployment pipelines, cross-shard replication, and auto-rollback monitoring to reduce the blast radius of zone-level failures from full-AZ to sub-zone cells, enabling faster incident recovery for a service on the critical path of **every EC2 instance launch**
 - Built a data partitioning tool (Java) that splits multi-terabyte MySQL databases into isolated cell-scoped replicas by resolving resource ownership across **6 domain types**, supporting dry-run validation, idempotent execution, and zero-downtime bootstrap from zone-level snapshots, used in production to stand up new shards without impacting the millions of networking mutations processed daily at **sub-100ms P99**.
 - Implemented strongly consistent distributed reads across the newly sharded topology by building scatter-gather routing that fans queries to the correct cell, migrating **45+ API paths** to enforce strict cell-level transaction isolation and building fleet-wide rollback tooling (backfill APIs, truncation scripts, phased deployment procedures) to guarantee safe reversibility during the multi-month production migration
 - Owned CloudFormation resource provider reliability for EC2 network resources across **all 4 AWS partitions** (commercial, GovCloud, China, isolated), onboarding automated contract testing and canary infrastructure, resolving cross-partition deployment failures, and shipping multiple customer-requested features end-to-end from integration testing through multi-region rollout

Amazon

Arlington, VA

Software Development Engineering Intern

August 2024 - November 2024

- Expanded payment method coverage for Prime Video, Amazon Music, and Kindle across **26 countries** by integrating **7 new local payment methods**, improving checkout accessibility for **200M+ customers**
- Extended the LPCA payment processing service by implementing a new Lambda handler with retry logic, improving fault tolerance and adding a new processing dimension to the distributed payments pipeline

Capital One

McLean, VA

Software Engineering Intern

June 2024 - August 2024

- Built an admin console for credit card campaign management in React/TypeScript, reducing campaign manager overhead and saving **millions in revenue monthly** in unrecovered campaign failures
- Achieved comprehensive test coverage across unit, component, and end-to-end layers using Jest and Cypress, validating both happy and sad path user workflows to ensure production reliability
- Built audit logging APIs (Python, Lambda, DynamoDB) to track user actions within the console, powering campaign execution failure rebound metrics and serving as the compliance audit trail for campaign operations

TECHNICAL SKILLS

Programming Languages/Frameworks: Java, Ruby, Scala, Python, Spring, C#, SQL, MySQL, JavaScript, C, HTML, CSS, OCaml, Rust, Pandas, AWS (Lambda, EC2, S3, DynamoDB, SNS, SQS, ECS, Step-Functions), React/Next.js, Typescript, Jest, Cypress, REST APIs

Tools/Concepts: Git, Object-Oriented Programming, Distributed Systems, Concurrency Control, Algorithms, Claude Code/Codex, Agentic Development, Machine Learning, Linux, Functional Programming, Agile Methodology, Confluence, Jira, Azure, Splunk, Unit Testing, Component Testing, End-to-End Testing

PERSONAL PROJECTS

Smart Kitchen Manager App - React Native, Supabase, Claude (IN DEVELOPMENT)

- Building a cross-platform iOS/Android app that tracks pantry/fridge inventory via barcode scanning and receipt parsing, generating AI-powered recipe recommendations and grocery lists based on current stock and dietary preferences; targeting App Store launch with a freemium subscription model