MICHAEL RICHTER

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EXPERIENCE

Capital One, Richmond, VA   AUGUST 2020 – Present
Senior Associate Software Engineer
- Owned and delivered 20+ production AWS Lambda–based services supporting data transformation, secure file delivery to external partners (FIS), and REST APIs for downstream financial systems
- Architected and implemented a message-queue–driven system (AWS SQS) to prevent duplicate processing and ensure idempotent workflows across distributed services
- Built and scaled a serverless reconciliation pipeline processing ~1,000 financial wire transactions per day between internal systems and external vendor platforms (FIS) using AWS Lambda and DynamoDB (NoSQL schema and GSI design)
- Led the end-to-end delivery of a serverless compliance component that encrypted external documents using PGP, eliminating duplicate uploads and saving 30+ associate hours per month
- Standardized and automated AWS infrastructure configuration (S3 policies, triggers, cross-region deployments) across 15 production buckets, reducing setup errors and maintenance overhead
- Designed and automated a Python (Pandas) data ingestion pipeline integrated with internal platform APIs, improving accuracy and efficiency by ~90% of a previously manual process
- Optimized Java-based APIs with pagination and performance enhancements to support large-scale loan data retrieval while maintaining database performance
- Validated system scalability through load and stress testing (Apache JMeter), identifying database bottlenecks prior to production releases
- Validated cross-region resiliency through annual disaster recovery exercises across AWS services
- Mentored and coached junior and mid-level engineers through onboarding, code reviews, and design discussions, improving team delivery speed and code quality

OpenDSA, Blacksburg, VA   August 2019 – December 2019
Undergraduate Research Assistant
- Developed data structure visualizations for an open-source textbook programmed in JavaScript
- Collaborated with a team of 7 to create a comprehensive textbook on programming language constructs, created for 200 students to use throughout each semester

Old Dominion Freight Line, Thomasville, NC   May 2019 – August 2019
Software Engineer Intern
- Developed REST microservices using Spring Boot in a production environment, supporting freight delivery workflows
- Implemented integration tests and mock services, creating 50+ test cases to validate service behavior prior to deployment

EDUCATION

Georgia Tech, Atlanta, GA   EXPECTED GRADUATION: MAY 2028
Master of Science in Computer Science

Virginia Tech, Blacksburg, VA   GRADUATED: MAY 2020
Bachelor of Science in Computer Science, Minor in Mathematics

SKILLS

Languages: Python, Java, JavaScript, SQL
Cloud / Infra: AWS (Lambda, EC2, S3, RDS, SQS, SNS, IAM, DynamoDB)
Tools: Git, Jenkins (CI/CD), Docker, Unix/Linux, JIRA
Certifications: AWS Certified Cloud Practitioner