Simon **Luu**

SENIOR SOFTWARE ENGINEER

Columbia, Maryland

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Professional Summary

Senior Software Engineer with 7+ years of experience developing scalable, performant backend systems in cloud-native environments. Strong background in Golang, Java, AWS, and distributed systems. Proven track record of delivering secure, production-ready services and leading modernization efforts. Passionate about system design, developer experience, and contributing to cutting-edge technology platforms.

Skills

- **Languages:** Golang, Java, Python, JavaScript, C#
- **Frameworks:** React
- **Cloud & DevOps:** AWS (Lambda, Step Functions, S3, EC2, CloudWatch, RDS), Docker, CI/CD
- **Architecture:** Microservices, RESTful APIs
- **Databases:** PostgreSQL
- **Tools:** Git, Confluence

Work History

Capital One Services, LLC   *McLean, VA*

SENIOR SOFTWARE ENGINEER   *Apr. 2022 - Present*

- Redesigned the fulfillment engine architecture in Golang to replace the legacy Java implementation, improving resiliency, security, and reducing run-the-engine (RTE) costs
  - Researched architectural alternatives to identify an optimal, cost-effective solution that supports enterprise-managed run-books for automated regional failover
  - Decomposed the legacy ECS service and re-architected it as a serverless solution using AWS Step Functions and Lambda
- Migrated two core Secured Card processes to an enterprise platform, reducing RTE costs and significantly lowering business risk
  - Served as the first team to integrate with the enterprise platform, leading the interpretation of technical documentation and conducting clarifying discussions to establish onboarding requirements
  - Collaborated with the enterprise team to document their infrastructure and processes in Confluence, including an architecture based on AWS Lambda and S3-driven batch jobs, and shared it with my team for onboarding
  - Replaced a business-critical manual data entry workflow with an automated data collection system to improve efficiency and reduce operational risk
- Created comprehensive documentation to support cross-functional development and accelerate onboarding
  - 8+ team-level READMEs and setup guides on how to setup the service
  - 5+ organizational wide documentation
- Developed a machine learning platform (MLP) leveraging Apache Spark on AWS EMR
  - Integrated feature generation output with enterprise ML platform via API
  - Validated data transformation queries in Databricks to prepare datasets for training machine learning models
- Mentored junior engineers and drove team knowledge sharing through code reviews and technical sessions

FEi Systems   *Columbia, MD*

ASSOCIATE APPLICATIONS DEVELOPER   *Nov. 2017 - Apr. 2022*

- Maintained and contributed to multiple React frontend applications across client projects
- Collaborated with cross-functional teams to gather requirements, deliver features, and ensure code quality
- Developed and maintained web applications for healthcare clients using React and .NET
- Integrated RESTful APIs in C# and managed frontend architecture for key deliverables
- Mentored new hires and contributed to documentation for team development practices

Education

University of Washington   *Seattle, WA*

BACHELORS OF ARTS IN MATHEMATICS – MINOR IN APPLIED MATHEMATICS