

Experience

Senior Associate Software Engineer, Card Tech DevOps — Capital One, McLean, VA Mar 2024 – Present

- Delivered novel feature to deploy AWS infrastructure-as-code resource stacks with dependencies in parallel through Jenkins pipeline, reducing time to production by as much as ~35% or 200 minutes per release for a business-critical platform; completed in half the expected time. Won TechX CIO Award Q3 2024.
- Launched internal React website for engineers to search and discover infrastructure-as-code patterns used throughout the enterprise for their applications, serving 400+ unique visitors with a reported development savings of 1 hour per site visit.
- Led production of conversion documentation to save an estimated 1,000+ man-hours across hundreds of Card Tech teams in year-long migration to new infrastructure-as-code pipeline, worked on prototype tools to convert projects automatically.
- Created automated regression tests for major pipeline component that improved the resilience against breaking changes impacting users, doubling the team productivity.
- Contributed capabilities to innersource projects to unblock Card Tech teams onboarding to infrastructure-as-code pipeline.

Associate Software Engineer, Data Science Feature Platform — Capital One, McLean, VA Feb 2023 – Feb 2024

- Designed and implemented a stateless, multi-region Lambda API in Python to enforce platform-wide governance policies for multiple components serving 40,000+ user-created machine learning data “features” in production, centralizing and streamlining future policy changes.
- Enhanced Python SDK to localize compliance checks that ensure data compliance of Feature Platform power users.
- Conducted cross-team end-to-end integration tests to validate the feature lifecycle supported business needs and met SLAs.

Software Engineering Intern, Data Science Feature Platform — Capital One, McLean, VA Jun – Aug 2022

- Developed proof-of-concept of a workflow that collects and displays information about feature datasets to improve data scientists’ visibility of data drift in their machine learning models.
- Configured an Argo CD sensor to trigger the workflow. Utilized AWS for OpenSearch data storage and Lambda API proxy to retrieve data drift results. Created a React webpage that calls the API and produces charts with the results.

Software Engineering Intern, Innovation Research — Suvoda, Conshohocken, PA Jun – Aug 2021

- Researched areas for future innovation in Suvoda’s clinical trial platform and proposed several machine learning approaches (e.g., time series regression, document data extraction), libraries and tools for solutions. Analyzed quality of data in Microsoft SQL Server to determine its strengths and pitfalls for using it in the proposed machine learning approaches.
- Presented findings and recommendations to senior management of Product Development.

Education

University of Maryland, College Park 2021 – 2022
 Master of Science, Computer Science GPA 4.0
 Research in *Vision Transformer for Image Clustering*

University of Maryland, College Park 2018 – 2021
 Bachelor of Science, Computer Science and Mathematics GPA 3.94, Cum Laude
 Selected coursework: Machine Learning, Data Science, Software Engineering, Data Structures, Algorithms, OO Programming, Computer Vision, Multivariable Calculus, Linear Algebra, Statistics

Skills

Certifications: AWS Certified Solutions Architect - Associate

Languages: Python, Go, Java, Groovy, TypeScript, JavaScript, C, C++, C#, OCaml, R, SQL, MATLAB, HTML, CSS

Libraries and tools: AWS, AWS CloudFormation and CDK, Docker, Snowflake, Splunk, Jenkins, PyTorch, TensorFlow, React, Node, Kubernetes, Git, GitHub

Manager evaluation: Able to work through ambiguous problems beyond expectation