SHYAM THIAGARAJAN

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EXPERIENCE

Senior Software Engineer Associate　　　　　**Capital One**　　　　　**Jan 2021 - Present**
- Created a *Java Springboot* web service in *AWS* to notify partner systems of account events (ie: new temporary card, new authorized user)
- Used *Apache Kafka* streams, *Docker*, a *microservice ECS architecture*, and *RDS* to scale for bursty traffic
- Mentored new engineers on codebase best practices through pairing sessions and planned the progression of their assigned work

Software Engineer　　　　　**Capital One**　　　　　**Aug 2019 - Jan 2021**
- Leveraged *Java Springboot* to create a high TPS Credit Card Decisioning Platform in the *AWS Cloud* for optimal resiliency and user experience
- Migrated a mainframe disclosure generation process to a *serverless AWS architecture* for cost efficiency and resiliency
- Developed an in-store account lookup web application using *Java Springboot* to allow customers to find accounts from personal information
- Used tokenization & encryption techniques to secure sensitive information (ie: ssn)

Software Engineer　　　　　**Spine Research Institute**　　　　　**Oct 2018 - May 2019**
- Used *Java Springboot*, *Hibernate*, *Swing* to produce desktop healthcare software with web backends
- Implemented multi-threaded capabilities for real-time sensor streaming

Software Engineer Intern　　　　　**Texas Instruments**　　　　　**May 2019 - Aug 2019**
- Enhanced the TI Deep Learning Library for concurrent neural network execution across heterogeneous devices: DSP, EVE, ARM CPUs
- Leveraged *C++* & Arm Neural Network library (open source) to expand compatibility to Tensorflow, Caffe, Onnx, and PyTorch networks
- Implemented a double-buffered execution pipeline to allow network partitioning, resulting in a 250% performance improvement

Software Engineer Intern　　　　　**Capital One**　　　　　**May 2018 - Aug 2018**
- Leveraged *Java SpringBoot* to create a web app for modifying microservice routes and Netflix Zuul filters for the mobile app back-end
- Used *Python* and a *Jenkins Pipeline* to validate Springboot YML profiles during code deployment, in response to production incidents

Software Engineer Intern　　　　　**Texas Instruments**　　　　　**May 2017 - Aug 2017**
- Used *C++* to add hardware profiling features to the OpenCL runtime
- Developed a Python UI for profiling and visualizing hardware events such as L1 Cache misses and Stall Cycles during OpenCL Kernel Executions
- Integrated Program trace and hardware status monitors into the runtime

Lead Software Engineer Intern　　　　　**Oak Ridge National Lab**　　　　　**May 2016 - Aug 2016**
- Lead team effort to visualize the national electric grid status on a US map for 911, FEMA, The National Guard, The White House
- Utilized *Python* to scrape utility outage websites and aggregate local outage data into *PostgreSQL* & *MySQL* databases
- Trained a Naive-Bayes machine learning classifier to extract outage relating tweets with 98% accuracy

Software Engineer Intern　　　　　**Oak Ridge National Lab**　　　　　**May 2015 - Aug 2015**
- Modeled and simulated patient adherence to the Hepatitis-C Cascade of Care
- Leveraged *Java* & Repast Suite to create agent based simulations

EDUCATION

BS Computer Science & Engineering　　　　　**The Ohio State University**　　　　　**GPA 3.9**

TA for: Web Development & Design, Principles of Networking, & Intro to Programming

AWARDS

Certified AWS Solutions Architect, Employee of the Month, Winner of 2016 OHI/O Hackathon, Full Tuition Scholarship, National AP Scholar

PROJECTS

eReader Mobile App: used NodeJS backend, NoSQL firebase notification API, AWS cloud to track reading ability & progress in reading app
Stock Trading App: used Python Flask backend, yahoo finance stock price api, https, DUO Mobile 2-factor authentication, Web captchas, inactivity timers, PBKDF2 encryption, and AWS cloud
Tweet Tone Analyzer: used Python Flask backend, IBM Tone analysis API, Twitter API to display tweet sentiment analysis from keywords

KNOWLEDGE

Languages: Python, Java, Ruby, C++, Javascript, SQL
Frameworks: Springboot, Hibernate, Rails, Flask, Django, NodeJS, Drools, Cucumber, Junit, Mockito, Karate
Platforms: Certified Amazon Web Services Solutions Architect, Jenkins, Postman, Git
Specialities: Cloud Architecting, Backend Web Development, Rest API Design, Database Architecting, Networking, Data Structures & Algorithms, Technical Writing, Presentations