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TU NGUYEN

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US Citizen

EMPLOYMENT

Software Development Engineer	AWS System Manager	May 2018 - Present
System Manager Agent		
<ul style="list-style-type: none">Developed and worked on open source, cross platform Agent written in Golang that is used provide operation and change management for millions of EC2 instances and on-premise servers.Refactored SSM Agent EC2 and On-Premise credential chain to increase security and add support System Manager Agent use on containers.Mentor and guided intern to create a feature that would allow customer to proactively monitor System Manager status on their fleets through CloudWatch metrics.		
System Manager Internal Use		
<ul style="list-style-type: none">Developed internal project that deployed and registered 100K internal AWS teams' on-premise production instances with System Manager.Worked on internal AWS project to develop operational tooling that leverage System Manager services such as Session Manager and Run Command to reduce AWS teams' human access to production hosts.Designed and implemented in-place patching solution that leverage System Manager to patch 600K production instances.Worked with AWS Security team to onboard internal AWS service teams to report instance patch compliance data via System Manager.		

Software Engineer, Intern	AWS Elastic Block Storage	Summer 2017
<ul style="list-style-type: none">Designed and implemented a performance testing service that allowed developers to run volume performance tests with different parameters and allocating server pools.Created command line tooling to interface with service and allow engineers to share testing results		

TECHNICAL EXPERIENCE

Projects

- Agent Modularization** – Project to modularize the SSM agent from a monolithic agent that had many service features entangled into a modular, discrete components. Researched possible IPC, like gRPC and protobuf to serve as the abstract communication between the core and the components. That way, components such as other agents could be written in any language and be loaded and managed by the SSM core agent.
- System Manager - Internal AWS Human Access Reduction** – Goal of project is to reduce human access to production hosts within AWS. Worked on a solution to deploy the SSM agent as well as the AWS credentials needed for the agent. By using SSM, AWS could reduce human access to production hosts, scan and patch security vulnerability, and also audit and manage access through other AWS services.

TECHNOLOGIES AND SKILLS

- Java, Golang
- AWS Cloud Services: EC2, IAM, CloudFormation, S3, DynamoDB, etc.
- DevOps, CI/CD Pipelines, Integration, Load, Canary Testing, Open Source project, AWS Regional Deployments, Infrastructure as Code.
- Operating System: Linux / Unix, Windows, OS X

EDUCATION

La Jolla, CA

- B.S in Computer Science, December 2017. In-major GPA: 3.6.
- Undergraduate Coursework: Data Structure and OO Design, Algorithms, Computer Operating System, Computer Architecture, Computer Networks, Databases, Computer Security, Compiler Construction

San Jose, CA

Bellarmine College Prep

Fall 2010 – Spring 2014