Alma **Wang**

SOFTWARE ENGINEER

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Summary

Current Software Engineer at Two Sigma with a breadth of experiences from working alongside quantitative researchers on a high frequency model simulation environment to building scalable AWS cloud native infrastructure in an internal insurance startup.

Work Experience

Two Sigma   *New York, New York*

FLOW TRADING ENGINEERING   *April 2020 - Present*

- Maintain the Java model simulation environment, research tooling, regression testing and post trading analysis tooling for a Two Sigma tick-by-tick variant of high frequency (HF) models that trade a $25B book.
- Engineering work for the release and performance monitoring of a new short-horizon trading tactic built on top of existing live trading infrastructure and simulation environment to deliver a projected annual increase of $0.25M in PnL.
- Collaborate with quantitative researchers to develop a new model evaluation framework with Beaker notebook friendly Python modules and underlying Java infrastructure used to summarize model performance on dozens of HF models.

MICROSERVICE INFRASTRUCTURE TEAM (WITHIN INSURANCE ENGINEERING)   *August 2018 - March 2020*

- Cross collaborated with engineering teams to build self-serviceable Terraform-based AWS infrastructure to scale the platform from 5 to over 10+ microservices within Two Sigma's insurance "start-up".
- Implemented a Kubernetes-based framework for safely running boxed researcher code called by the overall system to expand the company's data science capabilities.
- Drove migration from AWS Elastic Beanstalk to EKS (Kubernetes) with no work by application teams while maintaining complete feature parity.
- Support for and active deprecation of legacy insurance underwriting Java Dropwizard application.
- Built React front-end utilities such as mock JWT token retrieval tool to improve usability of infrastructure teams' work.

HR ENGINEERING - SOFTWARE ENGINEERING INTERN   *June 2017 - August 2017*

- Designed, implemented and released the Candidate Picks App to streamline the company's pre-interview hiring process from multiple hours of resume printing a week to an automated email and interactive front end application.
- Gathered user requirements by interviewing individuals across the company from Engineering Managing Directors to recruiters.
- Learned and built an Angular 2 + Typescript front end and Guice + Jersey + Jackson + Hibernate Java backend over 10 weeks.
- Implemented demo UI features for the front-end group to expand company usage of Angular 2.

Synopsys (formerly BlackDuck)   *Burlington, MA*

SOFTWARE ENGINEERING INTERN   *January 2017 - March 2017*

- Investigated the feasibility of identifying unique software from symbols in the compiled ELF binary executable files to improve the product's security vulnerability scan accuracy.
- Built a Java utility to parse symbols from ELF files and upload to the PostgreSQL DB.
- Proof of concept work for migration of PostgreSQL to an Atlas graph DB with Apache Hadoop and Spark.
- Wrote a D3.js based visualization of the data to convey rationale for graph DB migration for the company's Hack Day.

Volunteering

ImpacTS Coding Workshop   *New York, New York*

GROUP LEAD   *January 2019 - March 2019*

- Developed and led an Introductory Python course using a Adafruit Circuit Playground (simplified Raspberry Pi) to engage HS students in CS.
- Organized weekly lessons with students from University Heights High School at Two Sigma offices and with company employees as TAs.

Rewriting the Code   *Remote Program*

TECHNICAL MENTOR   *June 2020 - August 2020*

- Mentor and project manager for a group of 5 on the COVID-19 Resources Mobile App Project to promote CS careers amongst college women.
- Guided the group through developing a proof of concept Flutter framework app and demo with weekly sprints over 10 weeks.

Education

Dartmouth College - GPA 3.84   *Hanover, NH*

B.S. IN COMPUTER SCIENCE AND ECONOMICS, MINOR IN APPLIED MATHEMATICS   *September 2014 - June 2018*

Skills

- **Frameworks** - React, Kubernetes, Terraform, AWS
- **Languages** - Java, Python, JavaScript, TypeScript