

# Phoebe Yang

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## EDUCATION

TUFTS UNIVERSITY, 2019. B.S. Computer Science & B.A. Philosophy, GPA: 3.79/4.0 (Magna Cum Laude).

## EXPERIENCE

### TWO SIGMA INVESTMENTS

#### Software Engineer II on Portfolio Management Engineering

New York, NY (Mar '21 - )

- Design/engineer Yangtze Streaming, a high-performance big data processing platform for real-time streaming data.
- Develop and improve software tools for analyzing predictive model, investments, and financial markets, which include Yangtze (a dataset development and analytics platform) and Po (the dashboard UI for surfacing insights and data visualizations)
- Collaborate with internal users (portfolio managers, researchers, product managers) to gather software requirements and design and implement solutions to address business requirements.

#### Software Engineer I/II on Services Engineering

New York, NY (Aug '19 - Mar '21)

- Developed AppKit, Two Sigma's internal microservice framework that empowers service development lifecycle, provide tooling for service API development, cloud deployment, CI/CD, logging, and metrics
- Integrated cutting edge software solutions in the industry with AppKit to enhance the software development experience at Two Sigma, e.g. Kubernetes & GCP, gRPC, DataDog, Jenkins, OpenAPI
- Work impacted 200+ production services and all service developers at Two Sigma. Worked closely with other developers: recommended solution, assisted user migration, drove feature adoption, and taught the Java Intro to Web Service course
- Early promo cycle after joining 1 year. Became the point person for Java REST service development and client questions.

#### AMAZON ROBOTICS - Software Development Engineer Intern

North Reading, MA (Jun '18 - Aug '18)

- Built robotic simulation in Java to drive high-fidelity visualization of workcell operations and workflow in Amazon facilities
- Enabled real-time simulation and visualization from production data to support trouble-shooting

#### TUFTS COMPUTER SCIENCE DEPARTMENT - Teaching Assistant

Medford, MA (Sep '17 - May '19)

- Explain complex concepts in grad level programming languages and computation theory courses. Lead recitations, hold office hours, grade weekly problem sets

#### HUMAN-ROBOT INTERACTION LAB - Research Intern

Medford, MA (Feb '17 - Aug '17)

- Researched & developed a model to classify data of captured human motion using kNN algorithm

## PROJECTS

#### Yangtze Streaming Platform (Apache Arrow, Beam, gRPC, Kafka)

Apr' 21 -

- Designed and implemented a data streaming system using Open Source technologies for low-latency delivery of real-time trading and market data, empowers dashboards for monitoring intraday trading activities & portfolio management.
- Integration with trading systems, intraday databases and historical storage, integrated streaming datasets with the Yangtze ecosystem.

#### AppKit Apache Client (Java, OpenAPI, Apache HttpClient)

Dec'19 - Jun '20

- Researched, designed, and built a new service client in Java using open source library Apache HttpClient, rolled out to 200+ AppKit REST services at Two Sigma.
- ~85% performance improvement compared to the old client solution. New features include connection pooling, client metrics with visualization, integration with modern auth, smart retry with timeouts and backoffs.
- Added wide-range of tests including unit tests, integration tests, automated CI/CD test pipeline, load tests and performance tests before release, improved test coverage from 20% to 84%.

#### OpenAPILock | Yelp/Swagger-Spec-Compatibility

Sep'19 - Dec'19

- Similar to Protocol for gRPC, OpenAPILock enables REST service developers at Two Sigma to smartly manage service API changes and versioning. Leverages the Open Source library [swagger-spec-compatibility](#) created at Yelp.
- Built OpenAPILock to integrate swagger-spec-compatibility with Two Sigma internal build tools. The tool was rolled out to 220+ services, and helped corrected 58 services that previously had invalid OpenAPI specifications.
- Contributed to the leveraged Open Source project by adding improvements, the submitted [pull request](#) was merged upstream.

#### Action Learning Model (C++, Python, Matlab) - Human-Robot Interaction Lab

Aug '17

- Programed a ML model that classifies motion sequences by discovering alignment in subsequences.
- Used PCA and mRMR feature selection for data processing, nearest neighbor for classification.

## SKILLS

**Programming Languages:** Java, Python, Bash, C/C++, Javascript

**Technologies:** Git, Kubernetes, gRPC, Apache Arrow, Kafka, Pandas/Numpy, OpenAPI

## ACTIVITIES & HOBBIES

Powerlifting, Tufts Women's Fencing Varsity, Yoga, Rewriting the Code