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Education*Rutgers University, New Jersey***January 2021**Major: **Bachelor of Science in Computer Science (GPA 3.98)****Skills**

Java, Python, React, Angular, Typescript, Maven, C#, C, C++, MySQL, Git, Azure DevOps

Experience***Two Sigma New York City, New York*****July 2022 - Present****Software Engineer II - Discretionary Engineering - Navigator Fund**

Navigator, Two Sigma's first fully Discretionary Fund, is supported by 4 software engineers. Navigator manages over 1 billion in assets under management (AUM) and has had a year-to-date (YTD) return of 30% for 2023. All trades are based on models developed from traders' ideas, and the final decision to make the trades are made by the traders.

Navigator Performance Report

Java, Python, React, Typescript, SQL, PostgreSQL, jOOQ

- Lead development of an automated daily report of Navigator's profit and loss (PnL), alpha, risks, and exposure for group heads including the company CEO, head of operations, head of portfolio services, and others. Used to monitor fund performance and make decisions on corrective actions.
- Daily report captures breakdowns of asset classes, countries, holding periods, and trade ideas. Also captures Navigator's historical performance, risks, and exposures since inception. Provides displays for day-to-day, monthly, year-to-date as well as since inception.
- Provided via an internal website and an emailed Excel sheet. Data is generated four times a day and accessible via REST endpoints on a perpetually running Java Apache cloud server. Email is generated via a python script and website UIs are displayed via a react typescript server. Data used for calculation comes from Bloomberg APIs as well as internal two sigma pricing and data services and are stored in PostgreSQL tables.

Trade Tag

Java, React, Typescript, Python, SQL, PostgreSQL, jOOQ

Trade Tag is Two Sigma's tool for the management of discretionary trade decisions. It provides intraday pricing, performance, and positions to fund managers, traders, and modelers through an internal website. It uploads pricing data to Bloomberg for Bloomberg terminal-generated analytics.

- Added over-the-counter trade support for trades based on volatility, foreign currency exchange (FX), futures, options, equities, exchange-traded funds, and commodities.
- Create views on enterprise for emerging market models, including the model's performance since inception and ranking of weights. Productionalize modeler code to reduce disk usage, run on production machines, enable version control, deployment management, and code reviews.
- Fixed operational bugs such as tooltips disappearing, white screens, and out-of-memory crashes. Resolve concurrency issues as well as failed table migrations to resolve system outages.

BlackRock New York City, New York**March 2021 - May 2022****Software Engineer I - Aladdin Quality Engineering - Aladdin Performance Toolkit (APT)***Java, Spring, Maven, Node, Angular, Typescript, JMeter*

Aladdin Performance Toolkit (APT) is BlackRock's mandatory quality tool for all BlackRock applications that plan a release to production of which there are over one hundred. APT is managed by a team of seven, each of which serves as a guide towards improving applications performance.

- Developed frontend and backend changes to allow for application registration, cloning of templates and datasets, cleanup after runs, and email notifications.
- Gathered application usage stats to provide guidance on which features of APT are being used by which teams. Gathered data such as number and types of runs, active users, template, and dataset counts.

Software Engineer I - Aladdin Trading Core - Order Execution Management Service (OEMS)

Java, Spring, Maven, FIX

OEMS is managed by a team of over 40 people and manages BlackRock's core trading functionality, handling the life cycle of trades from placement to close. Trade messages are sent by standard protocol named FIX. The FIX server handles custom logic for trades with certain organizations (ex Bloomberg) via dialects.

- Adjusted server code to send custom trade messages to Bloomberg and Portware to fulfill trade requests for clients to allow for client onboarding.
- Improved release time for custom FIX messages from one month to one to two weeks via refactoring of FIX server. Separated client dialects into individual maven packages, allowing for the release of independent changes and easier rollback of bugs and issues.

Software Engineer Intern - Aladdin Product Engineering - Aladdin Client Reporting (ACR) June 2020 - August 2020

Java, Spring, Maven, Tomcat, Ignite, Telemetry, Grafana, Node, Angular JS, Angular 5

Aladdin Client Reporting is BlackRock's client report web tool and is managed by a group of over 30 people.

- Improved performance by upgrading the in-memory cache of the event processor server to an Ignite cache, allowing servers to utilize the cache from other instances and have more cache hits.
- Added telemetry to servers to enable faster detection and in-depth analysis of errors. Setup Grafana to present this telemetry data in a user-friendly visual format.
- Created a more modern and responsive experience for users by upgrading 2 web pages from Angular JS to Angular 5.

Shell Technology Center, Houston Texas

Software Engineer Intern

May 2019 - August 2019

C, C++, C#, Fortran, Node

- Upgraded STIM2001, a desktop-based matrix acidification program to a new version with new empirical models.
- In a team of five, fixed over 10 user interface issues and provided the foundation for future versioning of the programing by moving data storage from serialized STIM files to XML files.
- Added username and password security using OPC UA to GWAP (Gas Well Analysis Program), a web-based program designed to monitor alarms on production sites.