

# Nathan Duarte

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## SUMMARY

Motivated Software Engineer with almost 4 years of experience building external client-facing applications satisfying both business and technical requirements. Adaptable professional recognized by peers for effective problem-solving and technical skills. Looking forward to continuing to build unique solutions to tough challenges at your company.

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## EXPERIENCE

### Lead Full Stack Software Engineer

BNY Mellon

December 2021 – Present, Greater New York City Area · Hybrid

- Continued to work on OneView. In addition to previous responsibilities, also:
- Mentored 2 2022 summer interns while designing and building out demo user experience (mimic/replicate complete production functionality without database connection, using Hazelcast cache instead)
- Upgraded all internal team applications and projects to Spring Boot 3 (switching from Java EE to Jakarta EE, creating new logging solution to replace ESAPI, building new Spring Security 6 replacement for previously utilized internal BNY Mellon library...etc.) reducing the number of application vulnerabilities while also setting the stage for future upgrades.
- Built asynchronous file ingestion service from the ground up allowing users to upload files following any of 11 legacy csv, dat, or txt specifications which would in turn be validated and processed, utilizing Spring Integration and YAVI (<https://yavi.ik.am/>), thus easing client adoption of the new experience. The system has since been expanded to include even more specifications as clients continue to be onboarded.
- Created a data migration utility to automate the transfer of client data in production from legacy SQL Server and DB2 databases into the new experience during adoption phase, completely eliminating the need for support team to manually perform these extracts on a daily basis.
- Took on UI tickets as needed, working in Angular to help build the newly revamped user experience completely reimaged by the recently formed Treasury Services design team.

### Full Stack Software Engineer (SETUP Program)

BNY Mellon

July 2020 – December 2021, Greater New York City Area · Remote

- On Account Validation Services team, as the sole back-end developer, wrote the first iteration of the AVS application from scratch, which was then tested, deployed, and immediately adopted by users over the course of 7 months.
- Following the initial 7 months on AVS, transitioned to working on OneView. Responsibilities included:
- Writing, testing, and upgrading (over time) OneView's Spring Boot 2 containerized suite of microservices based on the project's business requirements
- Building gateway for services using Spring Cloud
- Adding Swagger documentation endpoints
- Securing all services using BNY Mellon internal libraries and Spring Security
- Implementing secure logging solution using OWASP ESAPI library and Lombok CustomLog
- Developing custom interceptor solutions for preprocessing and authenticating requests
- Performing VeraCode static scans of code base and taking actions as needed
- Publishing data via Kafka to downstream applications
- Coordinating with UI developers to roll new features out from end-to-end
- Collaborating with teams across Treasury Services, learning the business logic at heart of the application, and assisting other team members whenever possible.
- Occasionally contributed to features within the UI written in Angular.

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## PROJECTS

### Interactive Brokers FIX Application

May 2022 – June 2022

- Designed and developed a multi-threaded, high performance, large scale AWS application in GoLang connecting to IB's FIX API (<https://www.interactivebrokers.com/en/trading/ib-api.php>) using QuickFixGo engine (<https://www.quickfixgo.org/>).

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## EDUCATION

### Bachelor of Science (B.S.), Computer Science

University of Massachusetts-Amherst · Amherst, MA · 2020

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## SKILLS

Industry Knowledge: Web Development, Microservices

Tools & Technologies: Spring Boot 3, Spring Security 6, Spring Webflux, MongoDB, Java 17, Swagger/OpenAPI, Python, SQL, Python, Ruby on Rails, CSS, HTML, PySpark, Angular, Typescript, GoLang