

EXPERIENCE

Senior Software Engineer

October 2023 - Present

IBM

Armonk, NY

- Led the development of several critical microservices utilizing Java Spring Boot. This includes the mail service for email notifications crafted with Thymeleaf, a batch service that handles 10+ critical cron jobs using Spring Boot's scheduling interface, and interoperates with IBM MQ queues through the use of JMS MQ and Cloudant.
- Constructed a multi-threaded Exporter Service for data management between IBM Cloudant, DB2 databases, and ICA legal document generation, leveraging Java Spring Boot, Apache POI, and LibreOffice's LibrePDF.
- Managed IBM's CI/CD Maven and Node.js pipelines, enhancing delivery efficiency for numerous teams.
- Integrated End-to-End (E2E) User Interface testing into IBM's CI/CD pipeline, enhancing software testability.
- Developed system for Time-Based One-Time Passwords (TOTPs) to streamline automated E2E testing.
- Built an automated Python script, GitHub SSH Key Manager, which streamlines the process of generating and uploading SSH keys to GitHub or GitHub Enterprise accounts.

Software Engineer II

May 2021 - October 2023

IBM

Southbury, CT

- Developed a Spring Federated Auth Server integrated with IBM w3id SSO Open ID Connect 1.0 and IBM db2 database, enhancing authentication.
- Implemented a Search UI with multi-faceted filters and pagination using Next.js, Carbon Design System for React and Java Spring Boot.
- Developed a full-stack, editable data-table component using Carbon Design System and React Hook Forms.
- Created a custom Sidebar Tabs component via React's Carbon Design System, improving app navigation.
- Contributed to IBM's CIO CI/CD, creating custom CI/CD pipelines with enhanced support for Java v17, Maven, Spring Boot, and Node.js v18 LTS.
- Created an internal secrets updater reducing time spent updating secrets in IBM's CI/CD pipeline by 99.99%.
- Developed and inner-sourced the Spring Secrets Manager using Spring Boot v3 framework and IBM Cloud Secrets Manager for secure keystore retrieval.
- Developed and implemented a Multipart File Uploader project to expedite the process of integrating multipart file upload functionality using Spring Boot and React.
- Deployed a shift-left DevOps strategy emphasizing application security and industry-standard best practices.
- Enabled handling of approx. 150k files during quarterly close periods via Direct File Import (DFI) feature.
- Utilized Apache POI in a Java Spring Boot microservice for dynamic Excel document creation and parsing.
- Improved user authentication and security by implementing secure cookie management by setting the 'HTTPOnly' and 'Secure' flags on JWT and refresh token cookies to prevent cross-site scripting (XSS) attacks.

Software Engineer I

May 2020 - May 2021

IBM

Southbury, CT

- Implemented a chatbot with JWT-based user authentication and custom features such as media embedding through Box and application commands, facilitating personalization for iframe embedding. Conducted cross-functional demos, led implementation, and proliferated chatbot solutions throughout the organization.
- Improved data table performance with front-end pagination, achieving instantaneous load times.
- Utilized Swagger for API documentation of Java and Node microservices, streamlining team workflows and enhancing downstream integration efficiency.
- Developed an end-to-end Data Table feature for the Ledger Listing page using dynamic front-end filtering, sorting, and enabling instantaneous data filtering.
- IBM Developer JumpStart 2020 Slam participant where I collaborated with a team of engineers under a senior guide to tackle a department-specific issue. Resulted in the development of Krios, a GitHub bot for maintaining up-to-date dependencies, achieving enhanced DevSecOps in IBM Research. Awarded 2021 People's Choice Award for best Proof of Concept and Presentation.

Software Engineer Intern

May 2019 - August 2019

IBM

Southbury, CT

- Constructed a modal state management system that leverages Carbon Design System for React.
- Participated in IBM's Hack CIO intern hackathon. Led the development of a full-stack web application designed to encourage networking through matching. Integrated with Google Firebase to handle user login, account manipulation, and application data storage. Created and led the application presentation to a group of IBM executives and other hackathon participants.

EDUCATION

Georgia Institute of Technology

Master of Science, Computer Science (Specialization: Computing Systems & Security)

Atlanta, GA

May 2024 (Expected)

Cornell College

Bachelor of Arts, Computer Science

Mt. Vernon, IA

May 2020

PROJECTS

set-me-up | <https://github.com/nicholasadamou/set-me-up> | *Shell, Python, PHP, AppleScript*

set-me-up aims to simplify the dull setup and maintenance of Mac OS and *debian* development environments.

set-me-up-installer | <https://github.com/nicholasadamou/set-me-up-installer> | *Shell, Python*

A binary used to install and configure *set-me-up* on *Mac* and *debian* linux machines.

set-me-up-blueprint | <https://github.com/nicholasadamou/set-me-up-blueprint> | *Shell*

A template to manage *set-me-up* setups.

utilities | <https://github.com/nicholasadamou/utilities> | *Shell*

Custom-made Bash functions & utilities.

cloudant-backup-service | <https://github.com/nicholasadamou/cloudant-backup-service> | *JavaScript, Shell*

This service is designed to back up one or multiple Cloudant databases to a file and uploaded to a Cloud Object Storage (COS) bucket on IBM Cloud.

cloudant-restore-service | <https://github.com/nicholasadamou/cloudant-restore-service> | *JavaScript, Shell*

This service is designed to restore one or multiple Cloudant databases from a Cloud Object Storage (COS) bucket on IBM Cloud.

vineyard-vines-sales | <https://github.com/nicholasadamou/vineyard-vines-sales> | *JavaScript, HTML, CSS, SCSS*

A web app that fetches and displays the latest Vineyard Vines sales.

down-to-network | <https://github.com/nicholasadamou/down-to-network> | *JavaScript*

Down to Network is a dynamic web / mobile app optimized to connect new fellow IBMers to experienced IBMers through the power of matching.

krios-github-bot | <https://github.com/nicholasadamou/krios-github-bot> | *Python*

A pal that keeps your dependencies up-to-date.

multipartfile-uploader-demo | <https://github.com/nicholasadamou/multipartfile-uploader-demo> | *TypeScript, Java*

A 3-piece setup used to demonstrate the use of ultra-fast Multipart File uploading.

stockmine | <https://github.com/nicholasadamou/stockmine> | *Python*

Crowd-sourced stock analyzer and stock predictor using Google Natural Language API, Twitter, and Wikidata Query Service in order to determine how much, if at all, can emotions affect a stock price?

humblescrafer | <https://github.com/nicholasadamou/humblescrafer> | *Python*

A small script to retrieve Name, Price/Sale, and Time information from Humble Bundle store links for use in robots or web-hooks. Uses Selenium.

clion-gateway | <https://github.com/nicholasadamou/clion-gateway> | *Shell, Dockerfile, CMake, C++*

A portal to CLion using JetBrains Gateway and Docker.