

# JACK HENRY WELSH

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## EDUCATION

**Columbia University New York, New York**

**B.S. Industrial Engineering, B.S. Chemistry**

**April 2021**

**3-2 Program:** Dual Degree program between Columbia University and Georgetown University, B.S. in Chemistry from Georgetown University, Cum Laude

## EXPERIENCE

**Bank of America Pay Merchant Services**

**August 2021- Present**

*Java/Mulesoft Technical Lead*

- Lead sub team of 6 engineers in AGILE scrum framework to implement and maintain web APIs to support product onboarding and maintenance of payment terminals, software, and value added services
- Team assigned 1-3 quarterly projects budgeted between \$200,000 and \$1 Million
- Understand Pay Merchant Solution Architecture to design, maintain, and debug a network of 40 web APIs that includes 17 subsystems and generates \$120 million of annual revenue for Bank
- Design web APIs to integrate with new business partners including National Cash Register and Apriva. Produced Solution Architecture Diagrams, High and Low Level Design Documents, and yaml API spec

*Java/Mulesoft Associate Programmer*

- Converted business objectives to API flows integrating HTTPS Web API Requests, manipulation of JSON Objects, exception handling, MUNIT Testing, logging

**Revature Java Business Tech Stack**

**May - August 2021**

- Revature's Java Business Programming Tech Stack (Java Basics, OOP Design, Threading, Java NIO, JDBC, Hibernate, Apache Tomcat, Spring Framework, Spring Boot, Spring MVC, Webapps, APIs)
- OCA certified (June 2022)

**Lawrence Kelly & Associates Inc.**

**June - August 2020**

- Updated company database from legacy software to Microsoft Access and wrote C++ program to automate data transfer

## PROJECTS

**Technical Project: [Tracker](#) Financial App**

**Ongoing**

- *Postgres SQL Relational Database* – ORDBMS, 5 Relations, 3<sup>rd</sup> Normal Form, Stored Procedures, psql, AWS EC2
- *[Java Spring Boot Backend API](#)* – OOP, Hibernate ORM, Aspect Oriented Programming, Log4j, Web MVC framework, CORS, integrates Web APIs (Plaid), exception handling, Maven project manager, Web API, AWS EC2
- *[React/Node Frontend](#)* - Typescript, React, Web API Integration, JavaScript, JSX, Client Side Rendering, Plaid API, Hooks, Bootstrap CSS, NodeJS/Webpack package manager and bundler, AWS S3, Cloudfront, Route 53 DNS

**Personal Website:** – <https://JackHenryWelsh.com>

**Ongoing**

- A personal repository of my many projects, passions, and hobbies. React/Vite and deployed to AWS S3/Cloudfront. Features other React projects, C++ projects, Java full stack applications and other hobbies of mine.

**Technical Project: Axys Reader** – <https://github.com/jhw2167/AxysReader>

**June – August 2020**

- Wrote a C++ program to read reports generated in Microsoft Excel and convert to database ready format
- Implemented: Object-oriented programming, polymorphism, file streams, data structures, threading, exceptions

**Miscellaneous Technologies:** Bash Script, HTML, CSS and vanilla Javascript, Chat GPT, Github Copilot; Microsoft Office Suite, especially data analysis in Excel: Optimization with Solver, Regression