

# Joseph Agarwal

[josephag7@outlook.com](mailto:josephag7@outlook.com) | [linkedin.com/in/joseph-agarwal](https://linkedin.com/in/joseph-agarwal) | [joseph784.github.io](https://joseph784.github.io)

## EDUCATION

---

### University of British Columbia

Sept. 2020 – May 2025

*Combined Degree in Computer Science and Business - Dean's Honor List*

*Vancouver, BC*

- **Coursework:** Software Construction, Data Structures & Algorithms, Computer Hardware and Operating Systems, Database Management, Computer Networking
- **Extracurricular:** UBC Trading Group Quant Developer, BUCS Vice President, UBC MMHC Vice President

## EXPERIENCE

---

### Software Developer Intern

May 2023 – August 2023

*Powerex Corporation*

*Vancouver, BC*

- Constructed C# reconciliation app with Gembox to appraise CSV data and generate irregularity reports, reducing manual resourcing time from 2 hours to 2 seconds
- Reduced financial application render time by 30% through successful frontend migration from Angular.js to React.js, implementing session state storage and user authentication
- Programmed SPP data downloader API with certificate authentication/logging, and custom report builder to systematically populate databases and generate SSRS reports on real-time energy transmission data

### Full Stack Developer Intern

Sept 2022 – April 2023

*Cascade Aerospace*

*Abbotsford, BC*

- Created C# and jQuery scheduling application, constructing ASP.NET Core server and client side REST APIs to save the department 20 hours weekly in allocation time
- Implemented data transfer logic, to extract user metadata and save to ERP/custom databases with Entity Framework, tracking and sending 100,000+ entries with a 100% increase in efficiency
- Spearheading cross-department communication, developed and deployed 'CSV to Epicor' data-uploader utilizing LINQ and SQL, processing over 800,000 records daily

## PROJECTS

---

### Stock Backtest Engine | *Python, Flask, React, Node.js, JavaScript, Git*

- Built interactive dashboard with modular React hooks and Bootstrap to display Black-Litterman stock projections
- Programmed sector and benchmark multi-regressions against S&P, generating 5 performance ratios
- Created Flask backend API to translate data from AWS RDS to engine to dashboard

### CampusHero | *Typescript, HTML, CSS, Mocha, Chai, Git*

- Developed full-stack web app and API allowing users to query university classroom information
- Implemented custom query parser and Json/HTML data scrubber, displaying data with Chart.js
- Constructed comprehensive black and glass box test suite using Mocha and Chai

### Marine Data Center | *Java, JSwing, SQL, Oracle, Git*

- Built marine modeling application with a JSwing GUI, using SQL, Java and Oracle
- Designed comprehensive ERP, relational schema and database for remote persistent data store in 3NF
- Automated test pipeline by implementing a JUnit test suite to ensure flawless production deployment

## TECHNICAL SKILLS

---

**Languages:** C#, Java, Python, C++, C, JavaScript, TypeScript, SQL, HTML/CSS, R

**Frameworks:** React, ASP.NET Core, Node.js, Flask, JUnit, Mocha, Chai

**Developer Tools:** Git, Azure, Postman, Swagger, Firebase, VS Code, Visual Studio, IntelliJ, Jupyter

**Libraries:** pandas, NumPy, Matplotlib, Bootstrap