Eric Xie

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TECHNICAL SKILLS

Languages: Python, Javascript, Typescript, C/C++, Java, SQL
Frameworks/Libraries: React.js, Flask, Redux, Node.js, Express.js, Next.js, Pandas, Tailwind CSS
Developer Tools: AWS, PostgreSQL, MongoDB, Firebase, SQLite, Docker, Jupyter Notebook, Git

EDUCATION

University of Waterloo   Sep. 2022 – Apr. 2027
Bachelor's of Computer Engineering, Co-op   *Waterloo, ON*
- Courses: Fundamentals of Programming (C++), Linear Algebra, Calculus, Discrete Math

EXPERIENCE

Software Engineer Intern   Sep. 2023 – Present
BMO Financial Group   *Toronto, ON*
- Developed **React** components and REST APIs using **Flask**, **Redux**, and **PostgreSQL** for an embeddable document management platform, enabling retail lending teams to seamlessly integrate their business system
- Wrote unit tests with **90%** coverage for AWS Lambda Layers using **Pytest** and **Boto3** to mock AWS services to validate individual functionalities, resulting in improved code reliability by **80%**
- Implemented client-side caching to persist component states and AWS Textract OCR retrieval results, reducing server load by **5%** and improving page load times **25%**

Software Developer Intern   Jan. 2023 – Apr. 2023
Brookfield Annuity   *Toronto, ON*
- Developed and deployed internal pricing tools by leveraging **Python**, **Pandas**, and **NumPy** to streamline valuation processes, resulting in the reduction of bidding turnaround times by **20%**
- Owned the development of a mail merge application to populate bid preparation documents and slide decks, **automating** a **30+ minute** manual process to provision contract deal requirements
- Designed and built an intuitive graphical user interface using Tkinter to replace legacy CLI-based process; adopted by **45%** of the organization and obtained a **98%** task success rate

PROJECTS

OptiWealth ☑ | *React.js, Typescript, PostgreSQL, Flask, Python, Firebase*   Sep. 2023 – Present
- Developed an all-in-one investment management platform, enabling users to monitor, analyze, and rebalance their portfolios to align with their asset allocation target based on risk tolerance/financial goals
- Architected a financial REST API within **Flask** to facilitate communication between PostgreSQL database and the client-server to deliver retrieval and update operations for user portfolio data
- Designed a seamless portfolio upload process using **Tesseract OCR** and Pandas to extract asset data from financial statements in either CSV or image formats

CollaboraCart ☑ | *React.js, Flask, Tailwind CSS, SQLite*   Oct. 2023
- Designed and built a platform that matches small businesses together to harness collective bulk buying power and achieve optimized per-unit costs on supplies
- Engineered a matching algorithm using **Python** designed to find the best matches among small businesses based on item needs, industry, and location, ensuring optimal cost benefits for every paired transaction
- Developed a comprehensive backend system using Flask and **SQLite** that streamlines registrations, order requests, and executes matching operations, ensuring a fluid user experience and efficient database management

PomoDuo ☑ | *React.js, Node.js, Express.js, Firebase, Socket.IO*   Apr. 2023
- Built a group study room platform using React.js and **Firebase** that allows users to generate/share room codes to join a Pomodoro timer study session
- Integrated bidirectional real-time communication using **Socket.IO** to enable concurrent timer functionality, resulting in **30%** increase in session completion rates
- Implemented server-side API endpoints by optimizing **Node.js** and **Express.js** to handle user/room validation