

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, SQLite, MongoDB, Firebase, 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 loan financing 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

PomoDuo - Synchronous Study App 🗄️ | *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

Build-a-Buddy - NLP Persona ChatBot 🗄️ | *Typescript, Flask, Tailwind CSS, Cohere API, Figma*

Jan. 2023

- Created a chatbot that allows for custom personas using **Cohere API** for NLP to accurately generate dynamic responses to user prompts
- Implemented a Flask backend to handle prompt/response endpoints and store chat history while maintaining bot personality
- Developed and designed a user-friendly interface using Tailwind CSS, **Material UI**, and Figma to deliver a seamless user experience and increase engagement with the chatbot