

Ernest Chiu

3A Honors Computer Science

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Languages TypeScript, JavaScript, C++, Python, C#, Java, SQL, HTML, CSS, Bash

Frameworks React, Spring, Redux, React-Native, NodeJS, Electron, Pulumi, Express, Koa, ASP.NET,

Tools Github/Git, Github Actions, MySQL, MongoDB, Docker, AWS

Experience

BorgIQ

Software Engineer

Jan 2020 – present

React, Node, Pulumi, AWS, Electron

- Introduced scheduling of Robotic Process Automation (RPA) executions by implementing a workflow system using **AWS, SQS** and **Lambda**
- Identified and resolved potential security flaw by reimplementing **Auth0** within the **React** app and **Koa** server
- Utilized **React** reusable components and **Redux** to display over **100+** RPA templates
- Improved user experience by utilizing **React** and **Electron** to upgrade the runtime from a CLI to a GUI
- Enhanced the RPA system's capabilities by introducing over **15+** APIs and libraries into the runtime
- Designed and implemented **Koa API** that connects to **S3** for users to securely store and upload assets
- Increased development speed by constructing a **CICD pipeline** to continuously update the development environment using **Pulumi, Docker, Github Actions** and **AWS**

Jana Technology

Software Developer

May 2019 – Aug 2019

C#, ASP.NET Core, SQL

- Developed a Cross Bore risk calculation product for gas distribution companies in North America which was deployed and released in August 2019
- Achieved a **60%** decrease in calculation run time by analyzing the calculation algorithm and utilizing **SQL Server Profiler** to identify and index the corresponding columns
- Improved the search features user experience by constructing a SQL query to generate a **location hierarchy** in JSON format from a SQL Server table

Projects

Money Manager

React, Node, Express

- Created a MERN stack application to budget and track monthly user expenses
- Achieved data persistence through mongoose and body-parser to store data in MongoDB
- Utilized lifecycle methods and Redux to dynamically update a list of the user's recent records

SubletSpot

Java, React, Redux

- Developed a web application targeted at students to ease the process of looking for sublets
- Constructed a REST API to interact with MySQL database using Spring Boot and Hibernate
- Implemented the front-end using React and Redux for users to easily query, post and filter sublets

Education

University of Waterloo

Bachelor of Computer Science

Sept 2018 - Apr 2023

- Relevant Coursework: Object-Oriented Software Development, Data Structures and Data Management, Foundations of Sequential Programs