

Ernest CHIU

3A Computer Science

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TECHNICAL SKILLS

Languages TypeScript, JavaScript, C++, Python, C, C#, Java, SQL, HTML, CSS, Bash
Framework React, React-Native, Redux, NodeJS, Electron, Firebase, Pulumi, Express, Koa, MongoDB, ASP.NET Core, jQuery, Bootstrap
Tools Github/Git, Github Actions, MySQL, Docker, AWS

PROFESSIONAL EXPERIENCE

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| January 2020
Present | BorgIQ, SOFTWARE ENGINEERING <ul style="list-style-type: none">› Expanded the functionality of the Robotic Process Automation (RPA) system by introducing over 15 new functions/libraries to the application and implementing the corresponding gRPC endpoints› Increased development stability and release cycles by constructing a CICD pipeline to continuously update the development environment and production builds using Pulumi, Docker, Github Actions and AWS› Developed and packaged a cross-platform electron desktop application for users to easily connect, setup and execute the RPA runtime› Improved the RPA system's collaboration tools by implementing import and export services using React, Redux, Node.js and Koa to allow sharing and saving of BorgIQ files |
| May 2019
August 2019 | Jana Technology, SOFTWARE DEVELOPER <ul style="list-style-type: none">› 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 correct tables in the database› Improved the flexibility and usability of the product by creating a SQL query to generate a location hierarchy in JSON format from a SQL Server table› Engaged with the full stack, from the front-end to the database layer utilizing all three layers of the MVC framework in ASP.NET Core to retrieve and manipulate data from the database and subsequently display results to the user |

PROJECTS

Money Manager

- › Created a **MERN** stack application that records a user's expenses and income
- › Utilized **React** and **Axios.js** to dynamically update the list of user's recent records by taking advantage of component **lifecycle methods**
- › Achieved data persistence through **mongoose** and **body-parser** to store data in **MongoDB**
- › Generated multiple **routes** and **models** to handle separate requests for income and expenses
- › Implemented unique user authentication and accounts by using **JWT** and **Redux**

JavaScript React Redux Bootstrap Axios.js Express.js Node.js Mongoose

Ominio

- › Designed and implemented an Uno-style multiplayer card game in **Java** using **Eclipse**
- › Implemented multiple **Object-Oriented Programming** aspects such as: inheritance, encapsulation and polymorphism to create the cards and deck

Java HTML5 PHP CSS3 OOP

EDUCATION

- | | |
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| September 2018
April 2023 | University of Waterloo, BACHELOR OF COMPUTER SCIENCE <ul style="list-style-type: none">› Relevant Coursework: Object-Oriented Software Development, Data Structures and Data Management |
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