Ernest Chiu
Computer Science

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Technical Skills

Languages	JavaScript, Python, C, C#, Java, SQL, HTML, CSS
Tools	React, Redux, AxiosJS, NodeJS, Express, MongoDB, Mongoose, Github/Git, ASP.NET Core, MS SQL Server, jQuery, Bootstrap, WiX Toolset
Others	Functional Programming, Object Oriented Programming, Database Optimization, MVC Architecture

Professional experience

May 2019 – August 2019

Jana Technology, Software Developer
> Developed a **Cross Bore risk calculation** product for gas distribution companies all over North America which was deployed and released in **August 2019**
> Achieved a **60%** decrease in calculation runtime by thoroughly analyzing the 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 data from the database, manipulate the data and display information to the user
> Built **data visualization models** by utilizing **Chart.js** and **Razor Pages** to effectively display relative Cross Bore Risk values
> Created a customizable **MSI package** that was used to deploy the product onto an **IIS Server** by utilizing **WiX Toolset**

Projects

June 2019 – Present

Money Manager
> Created a **MERN** stack application that records a user's expenses and incomes
> 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**
> Created 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`

January 2019 – February 2019

Everyday App
> Developed an app for managing daily tasks and information using **React**
> Implemented a weather app that utilized live data through **Axios.js** to make a HTTP request

`JavaScript` `React` `React Router` `JSX` `CSS3` `HTML5` `Axios.js`

January 2018 – February 2018

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`

Extracurriculars

September 2015 – April 2018

Student Council, Stouffville District Secondary School
> Managed logistics for over 20 events (semi-formal, charity events, prom, etc.) alongside 10 council members
> Volunteered over 300 hours to support school events and committees by overseeing council expenses and creating a student council website

Education

September 2018 – April 2023

University of Waterloo, Bachelor of Computer Science
> Relevant Coursework: Designing Functional Programs, Elementary Algorithm Design and Data Abstraction