RICHARD ZHANG

Waterloo, Ontario

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Education

University of Waterloo   **Sep. 2022 – May 2027**
Bachelors of Applied Science in Systems Design Engineering   *Waterloo, Ontario*
- Digital Computation (C++) — Linear Algebra — Introduction to Design — Graphics (Solidworks)

Technical Skills

Languages: Javascript, HTML/CSS, C++, MATLAB, C#
Frameworks and libraries:React.js, Next.js, Tailwind, Axios.js, ASP.NET, Material-UI
Tools: Git, Solidworks, Confluence, Excel

Projects

Restaurant Map web application *React, Javascript, HTML/CSS, Google maps API*   ⌂
- Incorporated **React.js** and **Material UI** to develop mobile-responsive application to display restaurants nearby student accommodations for university students
- Constructed HTTP requests using **Axios.js** from **google-maps API** and **Rapid API** to display restaurants and map data

Personal website project *Next.JS,Tailwind CSS, Javascript, HTML/CSS*   ⌂
- Utilized **Next.JS** and **Tailwind CSS** to construct mobile-responsive, user friendly portfolio website
- Created custom animations using Tailwind CSS to increase aesthetic appeal

Social Media Marketing case study   *paper link*
- Investigated efficiency of Richmond Hill Muay Thai Club's digital marketing techniques
- Implemented social media marketing and search engine optimization strategies that increased their website clickthrough rate by **16%**
- Email surveyed **50+** club members to determine existing client touchpoints

.NET MVC Contact us Page *.NET, C#, MVC Design Pattern*
- Developed ASP.NET Core web application using C# and MVC (Model-View-Controller) pattern to create front end for a contact-us page
- Proficient with MVC Design pattern and Razor Pages

3D Printed Puzzle *Solidworks*
- Modelled and printed a 3D Puzzle parts including moving parts and joints for rapid prototyping using Solidworks and Z-suite

Experience

University of Waterloo Alternative Fuels Team   **October 2022 – Present**
Front-end-Developer and Connected Autonomous Vehicles dept.   *Waterloo, Ontario*
- Utilized **React.js** to develop University of Waterloo Alternative Fuel Team's custom user friendly website.
- Collaborated with different development teams to develop the Competition History Module
- Researched differences between multiple lateral controls models using **SIMULINK** for the Advanced Driver Assistance System (ADAS).
- Utilized **MATLAB** and **SIMULINK** models to develop and constant radius maneuver algorithm for the 2023 Cadillac Lyriq

International Baccalaureate (IB) Council   **May 2019 – August 2019**
Grade representative   *Aurora, Ontario*
- * Collaborated in bi-weekly meetings to organize events for IB Students
- * Led the development of program-specific tutoring and feedback sessions for diploma final projects
- * Increased average participating student grades by 15% compared to draft predicted grades

Student Design teams / Clubs

- University of Waterloo Alternative Fuels team
- University of Waterloo Muay Thai