# Gordon Zhang

778-798-0399 | g234zhan@uwaterloo.ca | linkedin/gordonzhang1  | github/gordonzhang1| gordonzhang.ca

## TECHNICAL SKILLS

**Languages**: JavaScript, Typescript, C++, C, Python, Java, YAML
**Frameworks**: React, Node.js, Express.js, Jest, Bootstrap, Tailwind, Babel, Firebase
**Developer Tools**: HTML, CSS, Webpack, Docker, Postman, Git, Vercel, Bash, Figma, Jupyter, GCP
**Libraries**: NumPy, cmath, Lodash, Pandas

## EXPERIENCE

**Full-stack Developer**                                                         Sept 2024 – Present
*BLNDSPT Labs*                                                                      *Waterloo, ON*
- Developed user-friendly E-commerce web app with **Typescript**, **React** and **Node.js** as lead software engineer by delivering **20+** client requested features and boosting brand recognition by **300%**
- Optimized checkout page by developing a time-sensitive discount algorithm with **Python**, boosting purchases by **23%**
- Engineered **RESTful** APIs using **Express.js** for secure **Firebase Auth** system with for easy email login and sign-up
- Enhanced checkout security by integrating **Stripe** API's webhooks with **Node.js**, reducing checkout errors by **49%**
- Programmed cart, checkout, and order systems with React to optimize transaction flow, increasing conversion rates by **38%**

**Firmware Developer**                                                            Sept 2024 – Present
*UW Formula Electric*                                                               *Waterloo, ON*
- Programmed **CLI** command in **C** to control an inverter and send CAN message to modify inverter EEPROM parameters
- Developed a cooling control algorithm for a PDU, dynamically controlling fan operation based on temperature thresholds

**Software Curriculum Developer**                                                 Jan 2023 – May 2024
*ARTex Coding Society*                                                              *Vancouver, BC*
- Co-founded a global non-profit providing free coding lessons to **900** students across **4** countries by leading curriculum design
- Programmed **50** coding puzzles in **JavaScript** and **32** RESTful API exercises, increasing classroom engagement by **200%**
- Spearheaded curriculum development by developing 10 week-long lessons in JavaScript, **Java** and **Python** for **80** teachers

## PROJECTS

**ShakespeareAI** ⊕ | Website | *JavaScript, React, Node.js, Express.js, C++, HTML, CSS, Git, Firebase*
- Engineered **AI digital note-taking** web app with **React** and **Node.js** to quiz users on their handwritten notes in real-time
- Integrated AI quizzing system using **Cloud Vision** API to convert handwritten notes to text and **OpenAI** API to generate questions, improving text recognition accurac by **32%** compared to earlier pipeline designs
- Developed **Auth** system with Node.js & **Firebase** by integrating **RESTful** API's for user signup and password reset
- Programmed AutoSave feature for **data retrieval** using Firestore Database achieving **28%** lower data retrieval latency
- Optimized cost efficiency, reducing **87%** of unnecessary Firebase writes by integrating a debounce **Lodash** delay mechanism
- Architected digital pen with STM32 microcontroller and ADNS-9800 optic sensor to create digital notes on any surface
- Programmed STM32 in **C++** to read and translate optic sensor data every 10ms for writing to appear digitally

**LooLooLoo** ⊕ | *JavaScript, Typescript, React, Express.js, Node.js, HTML, CSS, Git, Docker, YAML, ESP32*
**Hack the North Winner 2024**

- Developed a full-stack indoor navigation web app with a **React** and **Node.js** to direct users to nearby bathrooms when they drink from a water fountain
- Engineered an interactive 3D indoor map using **Typescript** to show the real-time path from user location to destination
- Programmed an ESP32 microcontroller using YAML to ping Bluetooth proximity of users phones every 2 seconds and send POST requests, triggering Twilio to send custom SMS notifications
- Collaborated with 3 peers to deliver a winning product out of **1000+** participants in **36** hours by effectively using **Git** to review pull requests and resolve merge conflicts

## EDUCATION

**University of Waterloo**                                                          Waterloo, ON
*BASc in Computer Engineering, Honours, Co-op*                                    *Sep 2024 – May 2029*