

George Chen

georgecxchen@gmail.com | linkedin.com/in/georgechn | github.com/GeorgesCoding | georgescoding.com

EDUCATION

University of Waterloo - BAsC, Honours Electrical Engineering

Sep 2022 - Present

Relevant Courses: ECE 140 - Linear Circuits, ECE 124 - Digital Circuits and Systems

SKILLS

Programming Languages: C, C++, Python, Java, C#, JavaScript, HTML, CSS, ASP.NET Core

Tools/Technologies: Altium Designer, AutoCAD, Arduino, STM32, Apache, Git, Revit

Hardware: I2C Protocol, Breadboarding, Circuits, Soldering, Robotics, WHMIS Certified.

WORK EXPERIENCE

Plan Group - Electrical Designer | C#, Revit, AutoCAD

Jan 2023 - Apr 2023

- Worked on Project ALICE to develop 5 optimization tools in C# to improve design efficiency in Revit.
- Designed and fixed plumbing and electrical fixtures in Revit for TD Bank floor plan layouts.
- Implemented quality control inspections for electrical floor plan layouts for Sick Kids Hospital, examining over 40 layouts, aiding in a 70% reduction in completion time per layout.

PROJECTS

Chess Game | Python, Minimax AI

Jan 2024 - Mar 2024

- Created a chess game with all classic chess rules, developed in Python using the PyGame library.
- Has an AI bot built using a minimax algorithm with alpha-beta pruning for optimal decision-making.
- Employs a recursive algorithm to create a dynamic dialogue window that changes based on computer or player moves, pawn promotions, if a king is in check and when the game is won.

Breathalyzer Device | C/C++, STM32, I2C Protocol

Sep 2023 - Nov 2023

- Architected an alcohol detection system capable of approximating the alcohol concentration in the air.
- Implemented an MQ3 alcohol sensor that interfaces with an STM32 microcontroller to compute the percent of blood alcohol in the air and display the result on an LCD screen using I2C protocol.
- Integrated a calibration procedure that uses the MQ3 to gather real-time data on the changing electron flow in the sensor in clean air, allowing for more accurate readings in various environments.

Portfolio Website | HTML, JavaScript, CSS, jQuery

Mar 2024 - Present

- Custom website showcasing my work experience and projects, viewable on the majority of platforms.
- Animations built with pure JavaScript and CSS using element ID detection and class toggling.
- jQuery and JavaScript to dynamically render a template HTML file for individual project pages.
- Contact form integrated with reCAPTCHA verification that automatically emails my account on send.

Blackjack Game | Java, Linked Lists

Apr 2022 - Jun 2022

- A game of Blackjack with traditional casino-style Blackjack rules and a dealer to play against.
- Uses linked lists to connect the deck of cards and resets the deck after each game.
- Simple GUI with updating cards, scoreboard, dialogue and buttons for hit or stand and new games.
- Utilizes Java Swing for the interface and ActionListener to handle button clicks.