

# Cindy Peng

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## TECHNICAL SKILLS

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**Languages:** Python, C++, C, JavaScript, SQL, HTML/CSS, Java

**Frameworks/Tools:** React.js, Node.js, MongoDB, Express.js, Unity, Docker, Google OAuth 2.0, Google Client API, Git, GhostInspector, Jira

## EXPERIENCE

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### Project Lead

Jan. 2023 – Aug. 2023

*Electrium Mobility* — [github.com/Electrium-Mobility/anti-spark/](https://github.com/Electrium-Mobility/anti-spark/)

Waterloo, ON

- Utilized **KiCad's schematic and PCB layout** features to create a comprehensive and well-organized anti-spark circuit design implemented into the personal electrical vehicles to prevent high-voltage sparks when dis/connecting
- Implemented **SPI signals** to communicate with DRV8301 motor driver and NRF23L01 transceiver module
- Modified Pulse Width Modulation duty cycle values to determine the speed of Brushless DC electric motors
- Utilizing SPI protocol to interface with a nRF24L01 module for **wireless communication** between boards

### Javascript Developer

Sep. 2022 – Dec. 2022

*Enzuzo*

Kitchener, ON

- Implemented client-interactive **frontend** RSS Feed from scratch using **React** framework and **Javascript** routing
- Created, managed, and **modularized 90%** of automated tests using **Ghost Inspector** for enterprise & Shopify
- Independently conducted rigorous manual testing through **XPath** targeting for the production and staging

### Desktop Services Technician

Jan. 2022 – Apr. 2022

*Questrade Inc.*

North York, ON

- Utilized **Active Directory** service for **200** Questrade employee account creation management and termination
- Re-imaged Lenvos and Macbooks with **Powershell** scripts to add laptops to proper OU's, push GPO's and SCCM
- Collaborated with Networking and System administration teams to collect data and troubleshoot internal issues that were affecting company executives, Citrix users, and Questrade employees

## PROJECTS

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### 🔗 Spotify Display Stats | *Node.js, Express.js, jQuery*

- Developed a web application using **Node.js** and **Express.js** that retrieve users Spotify top tracks
- Implemented a secure **authentication flow**, including login and callback endpoints that generates a random state for CSRF protection, sets cookies, and redirects users to Spotify's authorization page.
- Employed jQuery to streamline DOM manipulation tasks, enabling dynamic content updates and simplified event handling in the Spotify authorization flow project, enhancing the user experience

### 🔗 Mewzaki - Music Mixer | *Python, Google OAuth 2.0, pydub, moviepy.editor*

- Developed a **Python** script using **ytdlp** for automated Spotify song extraction, transformation into lo-fi variants, and subsequent upload to the Mewzaki YouTube channel
- Implemented secure **Google OAuth2** authentication for seamless access to the **Google Client API**, safeguarding client secret keys via a script-generated **token.pickle**
- Orchestrated audio and video content generation with **moviepy.editor**, achieving dynamic visuals and audio integration, while implementing **ytdlp**, **pydub**, and **aubio** to enable precise audio processing

### Morse Code Puzzle | *Python, Google OAuth 2.0, pydub, moviepy.editor*

- Created a user-friendly puzzle in **C** by implementing a Morse code system by translating letters and numbers visually through a blinking LED light
- Utilized OOP concepts and **multi-dimensional arrays** to displayed Morse onto the **STM-32 Nucleo** board
- Allowed users to **interactive** with the program by corresponding the length of the push button to Morse code

## EDUCATION

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### University of Waterloo

Waterloo, ON

Candidate for Bachelor of Applied Science (Computer Engineering), 3.5 Cumulative GPA

Sep. 2021 – Apr. 2026

\* Recipient of University of Waterloo **President's Scholarship**