Mingrui Zhang

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Education

- **University of Waterloo** — Waterloo, Ontario
  MEng in Electrical and Computer Engineering; Software specialization — *MAY. 2022 – Present*
- **McGill University** — Montreal, Quebec
  B.E. in Electrical Engineering; GPA: 3.56/4.00 — *SEP. 2014 – MAY. 2018*

Experience

- **Savoir-faire Linux** — Montreal, Quebec
  Software Developer — *MAR. 2019 – DEC. 2021*
  - **Jami**: Jami is a multi-platform SIP-compatible distributed peer-to-peer soft-phone and SIP-based instant messenger. The goal of my team was mainly to improve the existing Windows client and develop new features corresponding to the changes in the daemon.
  - **Qt & QML**: Participated in migrating the Windows client development from Qt Widget modules to QML which is a declarative UI language module. Made some of the initial verification steps which could be found here. Since then, Jami has primarily used QML for multi-platform development.
  - **CI & CD**: Maintained the Jenkins CI & CD pipeline. Wrote the groovy scripts for the client's beta release job. Participated in the client's build automation design by utilizing CMake to generate the vcxproj and writing some of the build scripts using Python.
  - **Wix Toolset**: Restructured the existing Wix project for better installer appearance. Optimized the existing installation sequences and added multiple new actions for a better user experience.
  - **SIP**: Participated in maintaining the SIP backend. Debugged and tested several SIP functionalities by using various SIP accounts from different providers.
- **E-Innovation** — Montreal, Quebec
  Automation Developer Intern — *MAR.2017 – AUG. 2017*
  - **Automation**: Cooperated with a Mechanical Engineering student to automate the sealing and taping progress of making a new type of electrode. Wrote weekly documents which include the progress, the design, and the logic of the system, and present to the project manager in weekly presentations.
  - **Arduino**: Designed a system based on 3D printed parts and circuits controlled by certain logic uploaded in the Arduino Uno logic board. Wrote Arduino code and designed circuits by using electronic devices which include step motor, motor driver, switches, relays, etc.

Projects

- **OpenGL Based Mini DNF Like Game**: Designed and created a 2D game based on pure OpenGL and some third-party libraries The game contained one main character for the player to use, one type of monster, and one NPC. Some UI elements, including dialog boxes, buttons, etc., were also implemented. The video presentation could be found here
- **IoT – Sensor Data Management from Hardware to Cloud** : The system aimed to send recorded audio data from the programming board over the BLE (Bluetooth Low Energy) connection to the smartphone device. This data was saved as a file in the smartphone and uploaded to a cloud device. Implemented sound recording, board interconnections, and BLE hardware part in Embedded C.

Programming Skills

- **Languages**: C++, C, Python, Javascript **Technologies**: Qt ,Gerrit, Jenkins, React, OpenGL