# Hassam Sulehria

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## EDUCATION

**University of Toronto** *Expected: May 2024*

Bachelor of Applied Science in Computer Engineering *GPA: 3.32 / 4.00*

## TECHNICAL SKILLS

**Programming Languages:** C/C++, Python, Rust, Java, HTML/CSS/Javascript

**Hardware:** Arduino, Raspberry Pi, Verilog, ARM Cortex-A7

**Other Tools:** Git, Linux, MatLab, GDB, Jupyter, Trello, Vulkan, OpenGL, Flask

## EXPERIENCE

**Huawei Technologies Canada Co., Ltd** *May 2022 - May 2023*

*Software Engineer Intern*

- Designed and implemented a simulated virtual display using C++.
- Developed a client-server model for virtual display design.
- Fixed major bugs preventing critical functionality for application.
- Modified and parsed Android source code.
- Worked with Vulkan API for graphical processing tasks.
- Researched and tested emergent technologies in the field of computer graphics

## PROJECTS

**Professor Jorg Liebherr Capstone Project** Made with C++

- Attaching ESP32-Cam to a LoRa Mesh Network to transmit image data.
- Developing algorithms to fragment, compress, and transmit packets through CottonCandy network.
- Using Raspberry PI MQTT Broker to aggregate data to remote a server.

**MoodLights** *A Winner of MakeUoft 2021 Hackathon*

- Smart lamp made up of individually addressable LEDs controlled by Arduino and Raspberry Pi.
- Used Adafruit IO and IFTTT to control the lamp based on weather conditions.

**ComeNGo GIS** *Made with C++*

- A fully functioning GIS, focused on assisting commuters with C++, GTK, and OpenStreetMap API.
- Implemented A* search to find the best route between two destinations which the user searched.
- Developed a greedy algorithm to solve the traveling salesman problem.

**DE1-SOC Donkey Kong** *Made with C*

- Recreated classic Donkey Kong from scratch for the DE1-SOC development board.
- Developed rudimentary graphics and physics engine to animate sprites and update barrels.

**Machine Learning Image Colourisation** *Made with Python*

- Worked on an Artificial Intelligence project to colorize black and white images using CNNs in an autoencoder architecture with residual connections.
- Performed hyperparameter tuning and dataset acquisitioning.