

# FARES ISSA

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## SKILLS

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**Languages:** C/C++, Python, VHDL, Assembly, Java

**Hardware:** Nexys-3 FPGA Board, Arduino Uno/Nano, DSP, ESP32, Function Generators, Oscilloscope, Multimeter

**Tools:** Git, MATLAB, LabVIEW, Cadence, Xilinx IDE, LATEX, SolidWorks, AutoCAD, MS Office, Arduino, Android Studio

**Embedded Technologies:** I2C, SPI, TCP/IP, WiFi, Serial, GPIO, MicroC/OS-III, FreeRTOS, ARM Cortex

**Other:** Linux, MacOS X User, strong verbal and written communication skills, exceptional problem solving skills, result oriented, great teamwork and collaborative skills, strong understanding of agile design processes (SCRUM, XP)

## PROJECTS

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### Home Security System

Nov 2019

- Used a PIR motion sensor to trigger a system interrupt which captures image of intruder using Arducam camera
- Utilized FreeRTOS task synchronization, and communication on an STM32F429I-DISC1 Development board

### HackHarvard: IntervYOU (<https://devpost.com/software/hackharvard2019-intervyou>)

Oct 2019

- Designed interview simulator that analyzes speech patterns as part of Harvard's HackHarvard 2019 Hackathon
- Implemented speech to text and language processing Google Cloud API's into final design (*Python*)

### Embedded RTOS Controller

Sep – Dec 2019

- Implemented a real-time UC/OS-III based controller on an STM32f4 board to control a hot air plant
- Modelled the plant using LabView by analyzing step response, and open/closed loop PID tuning

### Hackville: Tag Along (<https://devpost.com/software/tag-along>)

Feb 2019

- Developed an Android application which elderly users can interact with in an effort to reduce the effects of social isolation as part of Sheridan's Hackville 2019 Hackathon (*Java, Google Cloud API*)
- Placed 2<sup>nd</sup> overall in the Hackathon, received Best User Experience Award

### Spinal Alignment Monitor (<http://spyneapp.com>)

Jan 2019 – Apr 2019

- Lead a team to design and prototype a wearable spinal alignment monitor over 3 months
- 3D modelling of the enclosure (*SolidWorks*), mobile application (*Java*) and product website (*HTML/CSS*) created

## WORK EXPERIENCE / EXTRA-CURRICULAR

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### Engineering Society | Guelph, ON | Computer Engineering Senior Representative

Sep 2018 - Present

- Liaison between the engineering student body, staff, faculty and administrators at the University of Guelph
- Planned various extracurricular activities for student body including: Graduation and the Iron Ring Ceremonies

### Tutor | Oakville, ON | Freelance Tutor

Jan 2018 - Present

- Teaching and assisting high school students in the fundamentals of Grade 11 mathematics, and grade 12 calculus

### Sheridan Nurseries | Mississauga, ON | PSC Sales Associate

May 2016 – Aug 2018

- Demonstrated strong interpersonal and communication skills through professional customer service

### Winners | Oakville, ON | Cashier

Jan 2013 – Sep 2015

- Proven attention to detail by receiving TJX Loss Prevention Recovery Award in 2015

## EDUCATION

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### Bachelor of Engineering in Computer Engineering Candidate

Sep 2015 – Apr 2020

*University of Guelph, Guelph ON*

- Graduate GPA: 3.3/4
- Dean's List (Fall 2019)
- Received the University of Guelph entrance Scholarship by graduating with the Ontario Scholar Award
- *Relevant Courses: Wireless Sensor Networks (89), Real-time Systems Design (91), Micro and Nano-Scale Electronics (76), Communication Systems (73), Microcomputer Interfacing (79), Systems and Control Theory (73)*