

# TREVOR R. SMITH

## ENGINEERING STUDENT

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## EXPERIENCE

### Research Assistant

#### University of Guelph AICV Lab

March 2019 – Ongoing    Guelph, Ontario

- Modelled dynamics of four-wheeled omni-directional robot
- Designed real-time control systems using NARX network for position and velocity control for use in path planning applications
- Developed feedback control loop for detecting encoder changes and estimating motor velocity
- Filtered Intel D435i video stream for joint-detection and distance estimation using OpenPose

### Innovation Web Application Developer

#### Sun Life Financial

April 2018 – August 2018    Toronto, Ontario

- Developed PoC voice applications, IVRs, and website chatbots using DialogFlow, AWS and Microsoft Azure
- Maintained the Sun Life Financial Provider Search Google Home and Alexa skills with a team by efficiently separating and developing tasks
- Collaborated with team members by documenting according to industry standards and maintaining proper version control

## PROJECTS

### Capstone Design Project

#### University of Guelph

September 2019 – Ongoing

- Develop docking system for robot in agile manufacturing setting
- Create localization system to return robot to base
- Build novel automated robotic end-effector detection and replacement mechanism

### MyWay Survey

#### Personal

Ongoing

Developing a system for a simpler, more personal survey filling experience in my spare time. Main points highlighted below:

- Programmed Arduino to print unique numeric code to receipts and upload data to Firebase in real-time using an ESP8266 Wi-Fi module
- Developed DialogFlow skill through Node.JS to allow customers to answer surveys through Google Assistant or IVR
- Created webhook to verify customers survey code at time of use and send custom survey based on purchases
- Reward user with discount code sent through SMS or email

## MY LIFE PHILOSOPHY

*"You can't always solve modern problems with classical solutions"*

## MOST PROUD OF



### International Brotherhood of Electrical Workers Scholarship

Awarded for achieving highest average of Engineering Systems and Computing students in first year



### FPCBP Scholarship

Awarded based on academics, extracurriculars, and community-involvement

## STRENGTHS

Hard-working

Passionate

Motivator & Leader

Honest

C/C++

Embedded Systems

Java

Statistical Analysis

Python

## LANGUAGES

English



French



Portuguese



## EDUCATION

### B.Eng. in Engineering Systems and Computing

#### University of Guelph

Sept 2016 – Ongoing

Average: 83%

## SOCIETIES

- IEEE Student Member (2 years)
- IEEE Control Systems Society Student Member (1 year)
- IEEE Robotics and Automation Society Membership (2 years)