

Abilarsh Vijiananthan

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📧 [AbilarshViji](#)

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Skills

Languages Python, Java, C, HTML, CSS, JavaScript

Technologies Git, Arduino, Linux, Android Studio, Docker, Kafka, OpenCV

Experience

McMaster University

Hamilton, Ontario

TECHNOLOGY INTERN

May 2019 - Aug 2019

- Developed in house, end-to-end **LoRa** network and infrastructure using **Docker, RPi, InfluxDB and Arduino**
- Created **Android** app comparing access times between MQTT, RabbitMQ (AMQP), Kafka, and DDS
- Set up **Kafka** pipeline from OPC UA Server to retrieve server cooling data for monitoring and visualization
- Built IoT demo station showcasing various microcontrollers and communication protocols to guests

Xerox Research Centre of Canada

Mississauga, Ontario

ELECTRONICS PRINT LAB TECHNICIAN

Jul 2016 - Aug 2016

- Prepared and tested substrates in the electronics print lab
- Replicated NFC Module in **Solidworks** for printing
- Optimized toolpaths to reduce print times by 20%
- Designed UI for capacitive touch interface using **Arduino** and **C#**

Projects

Smart Unlock (UoftHacksVI)

Toronto, Ontario

[HTTPS://GITHUB.COM/ABILARSHVIJI/UOFT HACKS VI](https://github.com/AbilarshViji/UoftHacksVI)

Jan 2019

- Developed **Android** App that allows the user to authenticate face and allow user to unlock the vehicle
- Set up SmartCar API backend using **Python** and Flask to handle unlocking the vehicle
- Utilized **Microsoft Azure's** Face API (Face Verification) to verify facial features

Boston Sidewalk Ratings (BostonHacks)

Boston, Massachusetts

[HTTPS://GITHUB.COM/ABILARSHVIJI/BOSTON HACKS 2018](https://github.com/AbilarshViji/BostonHacks2018)

Nov 2018

- Built **image classifier** that determines the quality of sidewalks for the City of Boston
- Gathered 400 images for training data by scraping Google Images using **Python** library
- Trained image recognition model using CustomVision.ai
- Tested model with images gathered from the Google StreetView API, and outputted the results to a webpage

GIGO Robotic Arm

Hamilton, Ontario

ENGINEER 1P03 - FINAL PROJECT (*Video Linked*)

Sept 2017 - Dec 2017

- Created 4 bar linkage arm to lift garbage cans for client who has cerebral palsy
- Utilized linear actuator, **Arduino**, joystick, and 3D printed components to develop arm

Employee Management System

Mississauga, Ontario

[HTTPS://GITHUB.COM/ABILARSHVIJI/EMPLOYEE DATABASE](https://github.com/AbilarshViji/EmployeeDatabase)

Feb 2017 - May 2017

- Implemented database based upon hashtable to store various employee entries
- Created intuitive UI with NetBeans using the Swing API in **Java**
- Applied efficient data structures such as hashing functions to reduce data access times

Education

McMaster University

Hamilton, Ontario

B.ENG IN ELECTRICAL ENGINEERING CO-OP, 3RD YEAR

Sept 2017 - Present

- Expected Graduation: Spring 2021

Online Courses

LYNDA.COM

- Audited courses on OpenCV, JavaScript, HTML, and CSS