

# Omar Alashqar

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## EXPERIENCE

### Data Engineering Intern | Loblaw Digital

Toronto Jan - Apr 2020

- Led research and development of a Data Governance integration to proactively validate data in BigQuery
- Migrated pipeline execution scheduling to Apache Airflow to improve system reliability and documentation
- Developed ETL data pipelines in Python by collaborating with teams to deliver insights to business analysts
- Implemented access permission configuration for tables within BigQuery as part of an internal ETL framework

### Software Developer | MAJiK Systems

Kitchener May - Aug 2019

- Implemented stateful streaming pipelines using Apache Beam to process time-series data for training ML models
- Co-Lead development of an IIOT dashboard tool and improved industrial protocol drivers for PLC communication
- Developed and migrated custom nodes compatible with Node-RED for IIOT connectivity, PLC mining, and more
- Built a GraphQL data mocking utility to improve test coverage, storyboarding, and development speed

### Software Developer | MAJiK Systems

Kitchener Sep - Dec 2018

- Implemented a system to make tracking progress of manufacturing processes easier for factory operators
- Extended a GraphQL API to support real-time data updates, reducing network latency and code-base complexity
- Built an alternative deployment tool for a subset of customers that cannot use Docker on Windows

### Web Developer | Rich Media

Toronto Jan - April 2018

- Developed front-end components for custom client-side routing and data visualizations using ReactJS
- Pioneered research and development for a company Google Assistant Agent to showcase products and services

## PROJECTS

### VHDL Compiler | [Ongoing] Compiler for a subset of VHDL (Java)

### ASCIIfy | Image to ASCII converter that supports webcam images and videos (NodeJS)

### Web Crawler | Multi-threaded crawler to discover PNG files starting from a seed URL (C)

### Duty Calls | Push notifications to any device with a button using the Onion Omega2 board (Python)

### Home Security System | Embedded system for detecting open doors/windows in a house (C)

### WAVE file player | Embedded system for playing songs from an SD card (C)

## ACTIVITIES

### Software & Electrical sub-teams member | UW Robotics Team

Waterloo Sep - Dec 2018

### Co-Founder & Tutor | High school Code Club

Mississauga Oct 2016 - Jun 2017

### Lead Programmer | FIRST Robotics Team 6378

Mississauga Oct 2016 - Jan 2017

## EDUCATION

### Candidate for BAsC in Honours Computer Engineering | University of Waterloo

2017 - 2022

- President's Scholarship for Academic Achievement & 2x Term Dean's Honours List
- Data Structures, Algorithms, Compilers, Unix System Programming, Concurrency, Computer Architecture

## SKILLS

Languages	C, C++, JavaScript, Java, Python, Bash, Verilog, VHDL, RISC-V ASM
Technologies	SQL, MongoDB, BigQuery, Apache Beam, AWS, GCP, NodeJS, ReactJS, GraphQL
Tools	Docker, Jenkins, Git, Linux, GDB, DipTrace, ModelSim, Vivado, Quartus Prime, NIOS II