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in [linkedin.com/in/bilaalhussain](https://www.linkedin.com/in/bilaalhussain) 🔄 BilalHussain

## SKILLS

**TOOLS:** Git, Postman, Jira, Emacs, Latex, Unix Shell, JetBrains, Android Studio, SPSS

**TECHNOLOGIES:** Node.js, Express, React, Bootstrap, AWS, Kubernetes, Firebase, Docker, OpenCV

**LANGUAGES:** C++, Java, Python, Lisp, SQL, Javascript, CSS, HTML

## EMPLOYMENT

### TOBYX CORP

Apr. 2019 to Current

#### Part-Time Software Developer

(Remote)

- Deployed CI/CD pipeline from the ground up using **AWS** and Docker
- Configured auto-scaling AWS EC2 & database instances
- Implemented Json Web Token authentication using Firebase federated auth
- Designed "Feedback" feature Node.js and PSQL - with database structure, API quality conforming to strongly scalable practices (DB Normal forms, RESTful APIs)

### HONEYWELL ATLANTA SOFTWARE CENTRE

Sept. 2018 to Apr. 2019

#### Software Developer Intern

Atlanta, GA

- Created highly optimized features for Honeywell's Flight Planning Engine (FPE) path finding algorithm in C++, which services 100k flight plans monthly
- **Boosted FPE startup speed by a factor of 120x** (1 hr -> 30 s) by spearheading integration of Boost binary serialization
- Conducted architectural design to implement type-ahead system with **5 µs delay (down from 75 seconds)** by optimizing **PSQL** queries and integrating **Redis** in-memory container into **Kubernetes**
- Developed extensible logging wrapper with **near 0 code and runtime overhead** with multilingual support using pre-processor macros

## PROJECTS

### Piping Instrumentation Diagram (PID) Classifier

Mar. 2019

- Created Python script in OpenCV that identifies components on PIDs, and returns JSON formatted parsing of connections and instrument models. Uses pyramiding, canny edge detection, and template matching.

### StayInTheLoop

May 2018

- Implemented Reddit bot which performs natural language processing using NLTK to identify trending stories, and email/PM short explanations to subscribed users

## ACTIVITIES

### Half-Ironman Marathon · Training

June 2019 to Current

- Triathlon date: September 13th, 2019
- Currently training 3x weekly

### Toastmasters International · Member

May 2019 to Current

- Completing Leadership Development Pathway
- 3 time 1st Place winner in weekly public speaking competitions with 30 participants

## EDUCATION

### The University of Waterloo

Sept. 2017 to Current

- 2B MAV 82%
- Currently 3A
- Anticipated Completion: April 2022
- Candidate for B.S. in Computer Science