

# Lucky K.B. Kim

The University of Toronto. 2017 - 2022

Bachelor's in applied science in computer & electrical engineering

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## LANGUAGES

C/C++  
Python  
Java  
JavaScript  
HTML/CSS  
SQL  
Verilog  
Assembly  
Korean

## WORK EXPERIENCE



### Software Engineering Intern

Java Springboot, AWS, SQL, Python

Toronto, Canada

09/2020 - 09/2021

- Improved the throughput of data streams of a large database between the client and server.
- Provided an accessible data transfer object which was cross-compatible with a variety of microservices using APIs and AWS.
- Architected and modified SQL relational databases to optimize for the company's workflow.
- Developed a slack webhook for sending messages to the corresponding people when GitHub updates occurred.

## TECH

Git  
Linux  
Springboot  
Express  
Node  
Postgres  
Mongo  
FPGA  
Unity  
MATLAB  
AWS  
QT  
PyTorch  
Modelsim

## PROJECTS

### Signal Processing Educational Tool

09/2021 - Present

C++, QT

- Developing an educational tool to teach students signal processing concepts through audio and visual feedback from synthesized waves.
- Created the method for playing sounds and audio files in real time.
- Integrated wave generation library to the environment.

### Food Detection and Classification AI Model

03/2020 - 04/2020

Python, PyTorch

- Produced a machine-learning algorithm that classifies pictures of food with the use of transfer learning of various convolutional neural networks.
- Revamped the algorithm to a region-based convolutional neural network so that our model can detect multiple foods in an image.
- Achieved an accuracy of 70%.

## RELEVANT CONCEPTS

OOP  
Data Structures  
Algorithms  
Multithreading  
Synchronization  
Machine Learning

### Basic Geographic Information System

01/2019 - 04/2019

C++

- Planned and created a multi-city map application with the OpenStreetMap API and the EZGL graphical interface library.
- Implemented Dijkstra's algorithm and optimized it using A\* heuristics and applied it to improve the traveling salesman problem.
- Refined the salesman problem with multithreading.

### Basic Platformer Game

03/2019 - 04/2019

FPGA, C

- Developed a basic outline of a platformer game with a partner with the use of the Intel software program, the Monitor Program, and an ARM processor chip, DE1-SoC.
- The game is compatible with the keyboard and flexible for further implementation.
- Added physics such as gravity and collision detection.

## INTERESTS

Playing sports  
Production & DJ  
Art  
Vim