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

TECH

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

RELEVANT CONCEPTS

OOP
Data Structures
Algorithms
Multithreading
Synchronization
Machine Learning

INTERESTS

Playing sports
Production & DJ
Art
Vim

WORK EXPERIENCE

CASEWARE

Software Engineering Intern
Toronto, Canada
Java Springboot, AWS, SQL, Python
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.

PROJECTS

Signal Processing Educational Tool
9/2021 - 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
3/2020 - 4/2020
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%.

Basic Geographic Information System
1/2019 - 4/2019
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
3/2019 - 4/2019
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.