

KEN JOHNSON

Computer Engineering Student at the Univeristy of British Columbia

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WORK EXPERIENCE

Corporate Research AI Engineer

Bosch

Jun 2020 – Present Tokyo, Japan

- Developed an optimized video classification model using human pose detection, RNNs, and CNNs with Python, TensorFlow and Keras
- Experimented with stock market forecasting using RNNs for time series data and NLP for sentimental analysis of relevant news articles
- Trained an AI agent to play complex mobile application games using Deep Q-Learning

Math Tutor

Math Tutor Network

Nov 2018 – Dec 2020 Vancouver, Canada

- Taught high school students topics including calculus and probability
- Prepared lessons for students every week catering to their abilities

TECHNICAL PROJECTS

Full-Stack Development

UBCUAS Engineering Student Design Team

Jul 2019 – Present

- Developed a simulated annealing algorithm to find the shortest path through a number of given way-points in a reasonable running time
- Designed the front-end to visualize the path determined by the simulated annealing algorithm on a map using React, and the back-end using Django
- Communicated frequently with team members and conducted code reviews

Autonomous Line-Following Robot

Class Project

Feb 2020 – Mar 2020

- Designed a Raspberry Pi powered autonomous line-following robot using optical sensors, sonar sensors, and a PID algorithm
- Implemented additional functionality by allowing an iOS application to take manual control of the robot
- Utilized Firebase and the MQTT protocol to interface between the Raspberry Pi and the iOS device, Swift to develop the application, and Python to program the Raspberry Pi

Language Learning App

Personal Project

Jan 2020 – Mar 2020

- Designed a web application that picks out words of interest from a website, translates them to some target language specified by the user, and then creates a set of flashcards for users to study
- Built the front-end using React, the back-end using Django, and the Google Cloud API to translate words

EDUCATION

Bachelor of Applied Science in

Computer Engineering

University of British Columbia

Sep 2018 – May 2023

Co-op: Available for 8 months beginning January 2021

SKILLS

Languages & Frameworks

Python

TensorFlow

Keras

Java

C

C++

JavaScript

CSS

React

Bash

Swift

Technologies

Git

Docker

Google Cloud

Firebase

IntelliJ

VS Code

CERTIFICATIONS

CS50's Introduction to Artificial Intelligence with Python

HarvardX

May 2020

- Gained exposure to the theory behind classification, optimization, and reinforcement learning
- Developed an AI agent to play Tic-Tac-Toe, Nim, Minesweeper and solve simple crosswords; also developed a page ranking algorithm, a traffic sign classifier, and a question solver

LANGUAGES

English
Japanese
French

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INTERESTS

Machine Learning

Web Development

Mobile App Development