

# Jeongwon Song

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## QUALIFICATION SUMMARY

*A diligent, ambitious, and fast learning student in Software Engineering Science at Western University, who is willing to build experiences in software designing, web-developing, data analyzing, and machine learning. If you would like to know more about me, please visit my portfolio.*

## EDUCATION

### Western University

Candidate for Bachelor of Engineering Science, Software Engineering (BESc), GPA:3.39

London, Ontario

April 2021

## AWARD/SCHOLARSHIPS

Dean's Honour List

2019

Western Scholarship of Distinction

2017

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, SQL, C/C++, Java, R

**Frameworks/Libraries/Platform:** Angular 8, React.js, Express.js, AWS, TensorFlow, Keras, Scikit-learn, Matplotlib, Unity, JavaFX

**Others:** Git, MySQL, MongoDB, Linux, Jira, IntelliJ, Spyder, Android Studio

## RESEARCH EXPERIENCES

### Summer Research Associate

London, Ontario

Single Dimension Generative Adversarial Network

2019

- Designed and implemented 1-dimensional GAN which generates a point on a fixed sinusoidal wave for an undergraduate research project under the supervision of Dr. Srikantha.
- Researched different deep learning models, and machine learning techniques to successfully create a model which generates points near the target function.
- Created and trained the model using a machine learning platform: Tensorflow and utilized different Python libraries including Keras, Numpy, and Scikit-learn to preprocess data, and analyze the effectiveness of the model.

### Research Assistant

London, Ontario

Faculty of Physiology and Pharmacy, Western University

2018

- Worked in CAD software and 3D printing for fixture of simple lab equipment under supervision of professor

## PROJECTS

### ForMe – Electric City Hacks 4 - Finance Advice Mobile Application

2019

Winner of Best Green Hack and Best Hack Second Place

- Built mobile application which providing best fit bank account options based on customers' transaction history using Android Studio, Node.js, Express.js, Mongo-DB.
- Predicting bank account options using unsupervised clustering algorithms, K-Mean, evaluated with silhouette using Scikit-learn, and trained after preprocessing data retrieved from TD-Davinci API.
- Visualizing data and clusters using matplotlib and analyzing classified data to extract features of different classes. Analyzed output of machine learning algorithms to map different bank account options.

### A-Eye Western Hack – Mobile Assistants to overcome visual imparity

2019

- Developed a mobile application to assist people with visual impairment which includes features like finding an object using a camera, sending text messages or calling a registered assistant or family over voice interface.
- Created the main server using Express.js and deployed it in AWS. Configuring and building connectors for any prebuilt APIs like Avaya API, IBM-Watson Visual Recognition API, etc.
- Built the server API which connects to MongoDB for required data storing related to the users and registered first in contact.
- Implemented the server API to make any text message or call to registered assistant using Avaya API.

### Image Classifier - Deep Learning Classifier

2019

- Implemented CNN classifier that predicts images of 6 categories of a natural scene including building, forest, glacier, mountain, etc.
- Trained model achieved validation accuracy of over 80%. Applied techniques like max-pooling, image rotating, etc.
- Developed and analyzed the model using different libraries like Keras, Numpy, and Matplotlib.

### Hospital Reservation Management Software (Angular 8, MySQL) – Academic Project

2019

- Developed database application which manages reservation for hospitals with different SQL queries for features like allocation of staff and patients based on symptoms, maintaining reservations, viewing medical staffs based on specialization, etc.
- Design RDBMS from creating an entity diagram to normalizing relations. Implemented database using MySQL along with generated real-like data that satisfies RDBMS using python script and data generating queries.
- Developed a Web application which utilized Multi-tier Client-Server architecture along with fundamental design patterns with Angular 8 framework