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## Education \_

# University of Waterloo, 3A, Computer Engineering

Waterloo, ON, Canada

BACHELOR OF APPLIED SCIENCES

Sept. 2015 - Summer 2020

• Relevant Courses: Algorithms and Data Structures, Linear Algebra, Discrete Mathematics, Signals and Systems

#### **Coursera Deep Learning Online Course**

Sept.2017

ONLINE

• Relevant Courses: Convolution Neural Network, Recurrent Neural Network, Improving Deep Neural Networks

# Work Experience \_\_\_\_\_

#### **Gamma-Dynacare Medical Labs**

Peel Region, ON, Canada

PREDICTIVE ANALYTICS ANALYST

Sept. 2017 - Jan. 2018

- Engineered RNN-LSTM for time-series data to make weekly prediction for hourly patient volumes by tests for 200 Dynacare location
- Improved prediction accuracy from 74% to 96% by adding exogenous variables, and fine-tuning RNN-LSTM parameters
- · Applied queuing theory to model wait time and optimized the number of staff using constraint programming
- Utilized transfer learning, retrained last layer of CNN with custom data to extract the dialog box data with 92% accuracy
- Scraped 1.3 million images of scanned Ontario medical forms from company's data lake making comprehensive DB of medical form
- Responsibility: research, project architecture, constraints optimization, project management, documentation, automation
- Technologies/Tools: Python, Keras, Pandas, SQL Server 2016, T-SQL, Anaconda, Excel, VBA, BeautifulSoup, Alteryx, H20

#### Vocatok (Start-up company)

Waterloo, ON, Canada

SOFTWARE ARCHITECT

Aug. 2017 - Current

- Vocatok is an **android voice messaging** app that lets user share voice stickers, voice emoticons, images, videos, contacts and location
- Responsibility: application architecture design, unit testing and optimizing the backend for client-server model on AWS
- Technologies/Tools: Android Studio, Java, XML, Twilio, AWS, Invision, Crashlytics

Blackberry Ottawa, ON, Canada

SOFTWARE ENGINEERING INTERN

Jan. 2017 - May. 2017

- Worked in UNIX based environment, developed android applications and services for Blackberry Hub+ suite
- Conceptualized a Restful service for maintaining the data of all 5 apps, reducing the maintenance hours by 400%
- · Gained a solid understanding of project management and software development life-cycle in an agile environment
- **Technologies/Tools:** Android Studio, Java, XML, SQLite, UNIX, Gerrit, Jenkins

# Projects \_\_\_\_\_

## **Recruit Restaurant Visitor Forecasting**

2017

KAGGLE COMPETITION

- Implemented CNN-RNN architecture to forecast daily customer volume for 829 Japanese restaurants for 1.5 months in advance
- Revamped the training data from time-series data points to images thus improving accuracy from 56% to 87%

Diabetic Risk Predictor 2017

DEEP HEALTH HACKATHON (WINNER)

- An android application which predicts the risk of diabetes based on the patient input data with 92% accuracy
- Engineered data visualizations for feature selection and trained random forests to predict the chances of diabetes

## Skills \_

Languages, Python, Java, C++, Android

Databases, MySQL, MongoDB, AWS, SQLite, SQL Server 2016

Web Technologies, JavaScript, jQuery, AJAX, JSON, XML

Libraries, Tensorflow, Keras, Pandas, Numpy, scikit-learn, matplotlib