




Jae Hoon (Antonio) Kim

Bachelor of Computer Science
University of Waterloo
(647) 964-5748

antoniojkim 
antoniojkim 
hire@antoniojkim.com 

TECHNICAL SKILLS

Languages: Python, Java, C++, C, SQL, R, JavaScript, HTML, CSS, Bash

Tools Used: PyTorch, TensorFlow, Spark, H2O, Pandas, Dask, Scikit-learn, Node.JS, Firebase, DialogFlow, IBM Watson, Java EE, Grails

WORK EXPERIENCE

Statistical Data Scientist · Capital One · Fall 2018



- Improved runtime of internal model scoring pipelines and tools by leveraging **Spark**'s powerful multithreading capabilities.
- Built a highly scalable feature engineering pipeline using **Spark** to engineer thousands of features for large datasets which were used to train **H2O GBM** risk models which added thousands of dollars in business value.
- Provided company with optimal use case analyses and performance benchmarks for **Pandas**, **Dask**, and **Spark**.

Developer · The Co-operators – Innovations Lab · Winter 2018



- Eliminated 750 hours yearly of repetitive human labour by implementing software robot process automation solutions (RPA).
 - Significantly increased efficiency of new and existing workflows by incorporating **SQL** scripts.
- Integrated seamless language detection and translation into company's AI chatbots using **IBM Watson** and **Node.JS**.

Enterprise Software Developer · Canadian Blood Services · Summer 2017

- Added a location and patient blood querying system to the existing **Java EE** and **Grails** web systems.
- Improved performance of existing web applications by optimizing current national enterprise systems.



RELEVANT PROJECTS

Ultimate Tic Tac Toe Zero

- Designed a **Deep-Q Reinforcement Learning** Model that can play the game Ultimate Tic Tac Toe
 - Surpasses human-level play and outperforms traditional Monte Carlo Tree Search methods.
 - Utilized **PyTorch** library to build and train the dynamic neural networks used to approximate the Q-function.



Relevant Keyword Analysis/Prediction

Won 3rd Place at Hack 4 Child Mental Health (2018)

- Built relevant keyword analysis and prediction models for Kids Help Phone.
 - Mined conversion text data and computed word frequencies using **Scikit-learn**'s text feature extraction tool.
 - Used unsupervised learning to train an analysis model to determine relevancy of keywords.



Interac-tions with Google Assistant

Won best use of Interac e-Transfer API at UoT Hacks V (2018)

- An action on Google that allows you to request payments using the Interac API through Google Assistant.
- Used **Node.JS** to build a **Firebase** webhook which interacted with intents and entities built in **DialogFlow**.



There's Waldo!

- Built an image recognition model that can find Waldo in a Where's Waldo map.
 - Used **Tensorflow** library to build and train the final **Convolutional Neural Network (CNN)** model.



Math Evaluation Library

- Created a **Java** library which comprises of an algorithm that parses mathematical input and produces the evaluation.
- Developed a **Calculator** application that wraps my math evaluation algorithm in a **Java** Swing GUI.



EDUCATION

Bachelor of Computer Science, Artificial Intelligence Option · University of Waterloo, Ontario



OTHER EXPERIENCE

- Won the **Hack the Valley Machine Learning Challenge (2018)**
- Attended **Hack the North 2017**, and contributed to the development of an **Atari Reinforcement Learning Model**

ADDITIONAL QUALIFICATIONS

- Language, Korean – Working Knowledge

INTERESTS

- Reading, Music – Piano, Table Tennis, Sci-Fi Movies