## Jae Hoon (Antonio) Kim

Bachelor of Computer Science, Artificial Intelligence Specialization University of Waterloo (647) 964-5748



#### **TECHNICAL SKILLS**

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

Tools Used: PyTorch, TensorFlow, Spark, Redshift, Pandas, Scikit-learn, Numba, Dask, H2O, Node.JS, Java EE, Grails

#### **WORK EXPERIENCE**

Machine Learning Engineer · Yelp, Inc. · January 2020 – April 2020

 Greatly expanded the applied machine learning teams' understanding of uplift modeling by designing and productionizing a revenue optimizing uplift model that helps Yelp better serve its (business owner) customers and better target potential advertisers.

Significantly improved team's uplift modeling capabilities by creating a powerful, versatile internal modeling library.

#### **Data Scientist** · Kik Interactive · May 2019 – August 2019

- Spearheaded company's antispam data science effort and made significant improvements on entire data science stack
  - o Built new, highly effective gradient boosted models that drove spam numbers down immensely.
- Optimized many model pipelines with high performing SQL queries and distributed Spark workflows

#### Statistical Data Scientist · Capital One · September 2018 – December 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 · January 2018 – April 2018

Eliminated 750 hours yearly of repetitive human labour by implementing software robot process automation solutions (RPA).

O Significantly increased efficiency of new and existing workflows by incorporating efficient SQL scripts.

#### Enterprise Software Developer · Canadian Blood Services · May 2017 – August 2017

Added a location and patient blood querying system to the existing Java EE and Grails web systems.

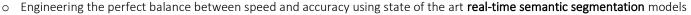
# Canadian Blood Services

WATONOMOUS

#### RELEVANT PROJECTS

#### WATonomous – Autonomous Driving Student Design Team - Perception Team Technical Lead

• Currently leading the team's **roadline detection** and **object detection** efforts.



o Developing reliable and accurate **object detection** models to detect pedestrians, cyclists, traffic lights, etc.

#### C++ Machine Learning Library (CML)

- A fully templated, fast and easy to use deep learning library specifically designed for use in C++
  - o Features dynamic graphs and fast automatic gradient calculations that make training models a breeze

#### There's Waldo!

- Designed a deep convolutional neural network specifically aimed at finding Waldo in Where's Waldo maps.
  - o Extremely fast, lightweight, single-shot object detection design inspired by the YOLOv3 architecture.

#### Ultimate Tic Tac Toe Zero

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

#### CalcPlusPlus

• Created a very fast and versatile Math engine using C++ that parses mathematical input and produces the evaluation.

### **EDUCATION**

Bachelor of Computer Science, Artificial Intelligence Specialization · University of Waterloo, Ontario, Canada

#### OTHER EXPERIENCE

• Won the Hack the Valley Machine Learning Challenge (2018)

#### **ADDITIONAL QUALIFICATIONS**

• Language, Korean – Working Knowledge

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

#### **INTERESTS**

• Artificial Intelligence, Deep Learning, Computer Vision









