Jae Hoon (Antonio) Kim

Bachelor of Computer Science
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TECHNICAL SKILLS

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

Tools Used: TensorFlow, Keras, Scikit-learn, Node.JS, Firebase, Spring Boot, DialogFlow, IBM Watson, Hyperledger, Java EE, Grails

WORK EXPERIENCE

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**.
- Introduced an improvement to the auto-insurance claims procedure by building a smart contract application using **Hyperledger Fabric**'s **Blockchain** technology.

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 following investigative analyses of the current national enterprise systems.

RELEVANT PROJECTS

Interac-tions with Google Assistant   Won best use of Interac e-Transfer API at UofT 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.**
- Utilized a **Firebase** real-time database to log transaction requests and perform backend data analytics.

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.
  - Fed relevant keywords into a dense neural network to predict tone and emotion of the conversation.

There's Waldo!

- Built an image recognition model that can find Waldo in a Where's Waldo map.
  - Experimented with many different architectures and input shapes to tune the hyperparameters.
  - Used **Tensorflow** library to build and train the final **Convolutional Neural Network (CNN)** model.

Encryption Library

- Wrote a **Java** library that features a personally-designed **symmetric cipher** and **cryptographic hash function**
  - Uniquely utilizes a private keystore and AES inspired byte-based operations to encrypt/decrypt/hash.
- Deployed a Rest API on **Google Cloud App Engine** made using **Spring Boot** to make my algorithm available through API requests.

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 · University of Waterloo, Ontario · Expected Graduation: April 2021

OTHER EXPERIENCE

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

ADDITIONAL CERTIFICATIONS/QUALIFICATIONS

- Certificate, First Aid with CPR-C (Lifesaving Society, 2016)
- Language, Korean – Working Knowledge