

Joseph Mok

Email: hojinmok@gmail.com

Portfolio: hjmok.github.io/josephmok_portfolio

GitHub: github.com/hjmok

LinkedIn: linkedin.com/in/hojinjosephmok

Skills

Languages: Python, JavaScript, MATLAB, C++

ML Libraries: TensorFlow/Keras, PyTorch, Scikit-Learn, NumPy, Pandas, spaCy, NLTK, OpenCV, PySpark

Databases: MySQL, SQL

Big Data: Hadoop, Apache Pig, Apache Spark

Professional Experience

Yaya Foods Corp.

Toronto, ON

Automation Engineer, July 2019 – Present

- Developed data mining process that extracts PLC transmitter data, stores in MySQL database, and presents it to Client application designed in Python and Ignition Automation software
- Lead the automation design for several SCADA systems for beverage manufacturing clients by integrating Rockwell Automation PLCs/HMIs, Ignition, MySQL, and ethernet IP networks
- Determined root cause of production halts through strong troubleshooting skills for hardware and software

Apple Inc.

Cupertino, CA

Recycling R&D Engineer Intern, September 2018 – April 2019

- Designed semi-autonomous prototypes for optimal disassembly and recycling of Apple products. Designs continuously integrated feedback to improve operator ergonomics and meet California waste regulations
 - Prototype resulted in a 90% increase in the Unit-per-Hour output compared to the current manual methods
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Projects

Topic Modeling for Question and Article Categories

hjmok.github.io/josephmok_portfolio/#/TM

- Used Scikit-Learn to implement Latent Dirichlet Allocation and Non-Negative Matrix Factorization methods to form clusters that acted as assigned topics to a Quora questions and NPR articles dataset
- Resulting model was able to assign each article/question to one of 12 topics, which the end user interprets

TFIDF Text Classification

hjmok.github.io/josephmok_portfolio/#/TFE

- Created a supervised learning model using Scikit-Learn to classify Positive/Negative reviews in an Amazon Reviews dataset and Ham/Spam text messages in an SMS dataset.
- Count vectorized each unique word in the training set, then applied Term Frequency-Inverse Document Frequency feature extraction. Used a Linear Support Vector Classifier to return the best fit hyperplane
- Achieved a 98% accuracy on the SMS dataset and 86% accuracy on the Amazon Reviews Dataset

Facebook Babi Dataset Chatbot

hjmok.github.io/josephmok_portfolio/#/CB

- Created a chatbot by implementing End-to-End Memory Networks and LSTM layers with Keras
- Trained on the Facebook Babi Dataset, which consists of a Story, Question about the story, and Answer
- Resulting model achieved close to 95% accuracy on the training data and up to 90% on the test data

Novel Text Generation Model

hjmok.github.io/josephmok_portfolio/#/TG

- Used PyTorch to create a deep learning model that uses novels such as Shakespeare and Tom Sawyer as inputs, then outputs texts that match the tone/vocabulary similar to the input novel.
 - Model utilized LSTM layers and dropout layers, which fed texts in batches to help the model understand the grammatical structure of the novels
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Education

University of Waterloo,

Bachelor of Applied Science, Honours Mechanical Engineering, Graduated June 2019