Joseph Mok

Email: hojinmok@gmail.com GitHub: github.com/hjmok
Portfolio: hjmok.github.io/josephmok_portfolio 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, HBase, Cassandra, MongoDB
Big Data Tools: Spark, Hadoop, Pig, Hive, Drill

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

Projects

Stock Prices Prediction hjmok.github.io/josephmok_portfolio/#/StockPriceRNN

- Created an RNN with LSTM model on Tensorflow to predict AMD and Google Stock prices by training on daily stock price data from May 2009 to August 2018.
- Resulting models were able to follow trend and scale of stock prices for quarterly and annual sequence sizes

Breast Cancer Malignant or Benign Diagnosis hjmok.github.io/josephmok_portfolio/#/BC

- Applied Logistic Regression and K-Nearest Neighbor analysis using Scikit-Learn and PySpark to a Breast cancer classification dataset with 32 columns of patient data
- Logistic Regression model achieved F1-score of 98% and K-Nearest Neighbour achieved F1-score of 97%

TFIDF Text Classification hjmok.github.io/josephmok_portfolio/#/TFE

- Created supervised learning models using Scikit-Learn and PySpark to classify Positive/Negative reviews in an Amazon Reviews dataset and Ham/Spam text messages in an SMS dataset.
- Applied Term Frequency-Inverse Document Frequency feature extraction to analyze the vocabulary
- Achieved a F1-score of 98% on the SMS dataset and 86% on the Amazon Reviews Dataset

User Movie Rating Prediction with AutoEncoders hjmok.github.io/josephmok_portfolio/#/AE

- Created a Stacked AutoEncoder model to predict what rating a user will give to a film.
- Trained on a Grouplens dataset with 1 million rows of move ratings from 6040 users across 3952 rows
- Achieved a train loss of 0.808 and test loss of 0.896, meaning every prediction is off by ±1 star

Education

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