Ran Tian

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Objective: **Entry Level on Data Scientist**, related to **Machine Learning**, **Data Mining** or other related areas.

Education

M.S. **Electrical Engineering, Minor: Computer Science** Sep.2015 - Dec.2016 (Expected)
University of Minnesota, Twin Cities, MN **G.P.A**: 3.93/4.0
B.S. **Electrical Engineering** Sep.2013 - May.2015
University of Minnesota, Twin Cities, MN **G.P.A**: 3.92/4.0

Experience

Wecash Inc. Beijing, China Summer Intern in Data Model Group May.2016 - Aug.2016

- Developed a web monitor system in Flask, analyzed the data with Python(pandas) and interacted the records with MySQL and MongoDB, presented the results using Hightcharts in JavaScript.
- Developed two interfaces for mining potential fraud, handled 20 GB data with Spark and upload the records to MongoDB in batch mode.
- Builded the model to predict the income and the debt condition for users with Logistic Regression, SVM, Random Forest, xgboost, achieved 82% in terms of AUC.
- Transferred the local csv files to HDFS cluster, wrote Python scripts to update everyday, analysis them in Spark with Python. Saved about 50% cost for storing data.

UMN. Minneapolis, US Research Assistant in Robotic Lab of Andrew Lamperski Jan.2015 - June.2015

- Builded the dynamic model for KUKA robot arm from Euler-Lagrange Equation.
- Applied Impedence Control, Linear Quadratic Regulator, Iterative Linear Quadratic Regulator and Model Predictive Control to the dynamic model and run the simulation in Matlab.
- Made a Symbolic Lagrangian Solver Package for the group, save 50% time to run the simulation.

Selected Projects

Data Monitor For Interesting Topics Personal Project On Process

- Crawled housing data from website and interacted the records with MySQL, presented different visualizations using Echarts with JavaScript.
- Analyzed the Minneapolis crime data from Kaggle, predicted the crime probability and crime type in Minneapolis using Logistic Regression and KNN, presented the results using Google Map API.
- Analyzed the US flight delays data from US Transport, builded regression models to predict the flight delays.

Music Genres Classification Project Programmer Sep.2015 - Dec.2015

- Took Mel-frequency Cepstral Coefficients(MFCC) and conducted PCA to form feature vectors.
- Applied different algorithms like KNN, K-means, Random Forest, Multi-Class SVM, Neural Network, achieved maximum accuracy - 92%.
- Applied different distance metrics including Euclidean Distance, City Block, Cosine Similarity, Pearson Correlation for different algorithms and compare classification accuracy.

Underwater Fish Size Estimator Project Leader Sep.2014 - Dec.2014

- Allocated different tasks for each group member and report to corporate sponsor biweekly.
- Proposed the Truncate method to detect fish in both images, increase the stability of estimator.
- Designed and Implement the core algorithm - Binocular Algorithm, achieve the estimation error less than 15% with camera's resolution - 320*240.

Skills

Programming: Python, Java, Matlab, SQL, HTML, JavaScript.
Platform: Linux, Hadoop, Spark, AWS.
Tools: Git, Jupyer Notebook, Navicat, Latex, PyCharm, Intellij, Anaconda, .
Links: GitHub, Personal Project