Shen Huang

(747) 206-4072 || shenhuang@live.ca || https://shenhuang.github.io/ || https://medium.com/@shenhuang_21425

EDUCATION

California State University, Northridge, Northridge, California, USA   September 2017 - June 2019 (Expected)
MS in Computer Science
Queens University, Kingston, Ontario, Canada   June 2015
BS in Electrical Engineering

SKILLS

Programming Languages: Octave, MATLAB, Python, Java, Julia
Data Science Frameworks: sckit-learn (auto-sklearn), Keras (AutoKeras), WEKA (Auto-WEKA)
Data Science Knowledge: Probability & Statistics, Machine Learning, Deep Learning
Cloud Frameworks: GCP, AWS (SageMaker, Rekognition)
Visualization Frameworks: Matplotlib, Excel, Tableau

WORK EXPERIENCE

Teaching Assistant @ NSF Data Science Camp   Starting September 2018
- Helped Students to be familiar with concepts and practice in Data Science, Artificial Intelligence and Cloud Computing Platforms.
- Made correct judgement on the best model before experimentation, improved several works by fine tuning the models.

Graduate Assistant   Starting September 2018
- Assisted the professor with research tasks including code production.
- Analyzed Behavioral Biometrics data with WEKA, skit-learn and auto-sklearn.
- Created data visualizations with Octave, Excel and Matplotlib.

Software Engineer Internship, CETC Motor   July 2013 - September 2013
- Worked on a compiler to support floating point calculation by modifying the lexical and syntax analyzer.
- Added English and Chinese support for help documents.

Electrical Engineer Internship, State Grid Corporation of China   July 2012 - September 2012
- Designed and Implemented a Java application to help managing error reports.
- Collaborated with six other engineers to validate the integrity of the communication system between the distribution station and the headquarters.

PROJECTS

Research on Behavioral Biometrics
- Feature Engineered 17 different Behavioral Biometrics features, generalized from literature review.
- Invented and a statistics theorem and applied it into inventing a new algorithm by creating a custom k-NN classifier from k-d Tree, applied a mixture model theorem to improve conventional classification models. The accuracy was improved from 72% to over 90% for the target data set.
- Build and trained a Generative Adversarial Network (GANs) to process data.
- Conducted AutoML analysis on the extracted features familiar with common Machine Learning and Feature Engineering algorithms, as well as Automated Feature & Model Selection algorithms.

Artificial Neural Network in C# for Unity
- Wrote an Artificial Neural Network from scratch (Including conversion of probabilistic distributions). This was done in demand of a group project before Unity Machine Learning Framework was mature. The Neural Network was train through Back Propagation, where the only one can be found online back then was trained through Genetic Algorithm.

Analysis on Photovoltaic System
- Collected, analyzed and visualized data collected from a Photovoltaic System.
- Designed a DC-DC converter system for Photovoltaic System, familiar with Battery Management, Maximum Power Point Tracking (MPPT), Power MOSFETs and control.
- Greatly stabilized the system through a custom control scheme.

Queens ECE Annual Robot Competition, 1st Place
- Designed a slam-dunk robot, code based on Arduino. Robot moves and grabs with servo motors utilizing Pulse Width Modulation. Robot senses the environment through touch sensor and distance sensors, and therefore was designed to have a close loop control system to adjust the speed for optimal performance.