Jifu Zhao

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Education

University of Illinois at Urbana-Champaign

Ph.D. *in Nuclear Engineering GPA 3.91/4.00* *May 2019*

Master of Science *in Applied Statistics* *May 2018*

Master of Science *in Nuclear Engineering* *Aug. 2016*

University of Science and Technology of China

Bachelor of Science *in Nuclear Engineering GPA 3.93/4.30* *Jun. 2014*

Related Courses

Introduction to Data Science	Statistical Learning in Data Science	Advanced Data Science	Machine Learning
Applied Regression & Design	Statistics of Big Data & Clustering	Pattern Recognition	Statistical Learning

Experience

Synchrony Financial (GPShopper) *Chicago, IL*

Artificial Intelligence Intern *May 2018 – Aug. 2018*

- Designed and built a complete data pipeline for data query, cleaning and transformation
- Conducted comprehensive feature engineering and visualization over millions of financial data
- Built predictive models with Logistic Regression, Random Forest and Boosting for loan status prediction
- Developed face detection and verification systems with OpenCV, Keras and TensorFlow

University of Illinois at Urbana-Champaign *Urbana, IL*

Graduate Research Assistant *Aug. 2014 – Present*

- Ph.D. Thesis: Implementation and Simulation of Mobile Sensor Networks for Nuclear Radiation Detection
- Led a team of five to develop the mobile sensor network simulation platform and conduct experiments
- Applied machine learning techniques (PCA, Autoencoder, KNN, SVM, Isolation Forest) to anomaly detection
- Developed algorithms with KDE, MLE and Kriging techniques for automated radioactive source localization
- Implemented Convolutional Neural Networks with Keras/TensorFlow for automated isotope identification

Projects

Large-Scale Landmark Recognition via Deep Learning *Spring 2018*

- Built triplet network with VGG16 and Inception network to extract abstract image features
- Implemented KNN algorithm for automated landmark recognition and labeling
- Improved accuracy through fine-tuning pre-trained CNNs on ~150K real-world Google landmark images

Hadoop Implementation of Movie Recommender System *Fall 2017*

- Constructed user-movie utility matrix and extracted co-occurrence matrix from Netflix movie review dataset
- Implemented item-based collaborative filtering algorithm through Hadoop MapReduce chaining jobs
- Made movie recommendations based on top-k user rating predictions

Lending Club Data Analysis and Modeling *Spring 2017*

- Conducted data cleaning, exploratory analysis and feature engineering on Lending Club dataset
- Implemented Logistic Regression, Random Forest and Neural Networks to predict loan status
- Achieved 0.79 AUC through oversampling on highly imbalanced dataset

Skills

Computer	Python, SQL, TensorFlow, Keras, R, MATLAB, Java, Hadoop, Amazon Web Service
Data Science	Numpy, Pandas, Scikit-learn, Matplotlib, Plotly, H2O, CatBoost, LightGBM, XGBoost
Machine Learning	Predictive Modeling, Anomaly Detection, Computer Vision, Recommender Systems