Yuanyuan Zhao

https://github.com/zhaoyuanyuan2011/

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Education

- **Cornell University** — Ithaca, NY
  Master (M.P.S) in Computer and Information Science — *Aug. 2018 – Dec. 2019*
- **University of Illinois at Urbana-Champaign** — Champaign, IL
  Bachelor of Science in Computer Science and Mathematics — *Aug. 2014 – Dec. 2016*

WORK Experience

- **PlusAI Automotive, Inc.** — Beijing, China
  Software Engineer Intern — *May 2019 - Aug 2019*
  - **Obstacle Tracking with CNN**: Set up data pipeline and finished implementation of a multiple object tracking model structures that utilizes Convolutional Neural Network, ResNet, and Feature Network Pyramid
  - **Deep Learning**: Trained the model with KITTI dataset, implemented new MOTA and MOTP metrics inspired by KITTI benchmark, improved the precision from 58.5% to 79.3%, and reached an accuracy of 89.5%.
- **Inspur Electronic Information Industry Co., Ltd.** — Beijing, China
  AI Software Engineer Intern — *Jan 2018 - Jul 2018*
  - **Data Classification**: Implemented value/frequency-based classifiers on Forex data; Designed and developed neural network model to predict exchange rate; Implemented stock prediction models utilizing ARIMA, GARCH and LSTM; Scrapped raw financial news online to predict the next investment hot spot for Bank of China.
  - **ML Research - LSTM and Auto-encoder**: Composed a paper on a novel description for exchange market based on auto-encoder and LSTM.
- **Morgan Stanley** — Champaign, IL
  Quantitative Analyst Intern (Remote) — *May 2016 - Jul 2016*
  - **Quantitative Analysis**: Collected stock market data, and analyzed statistical correlation between fundamental factors and key performance indicators of stock market based on linear regression, F-test, Students t-test, R-squared test and White test for heteroscedasticity implemented in Python.
  - **Statistical Modeling**: Quantified historical risk ratio parameters (alpha, beta and P/E ratio) associated with Chinas A-share market; established the impact of large beta on stock market bubble and crash risks.

Academic Projects

- **NLP Kaggle Competition** — Ithaca, NY
  Cornell University — *Nov 2019 - Dec 2019*
  - **ROC Story Cloze Task**: Designed and implemented an attention-augmented BiLSTM for as the encoder and a feedforward network as the output layer. Used GloVe as word embedding, and reached an accuracy of 54.7%.
  - **Language Model**: Fined tuned a pre-trained language model BERT-mini based on HuggingFaces Transformers.
- **Drop Rate Prediction by Virtu Financial Inc** — Ithaca, NY
  Cornell University — *Aug 2018 - Dec 2018*
  - **Machine Learning Algorithms**: Implemented and applied machine learning model, including Logistic Regression, Random Forest, Neural Network, KNN, SVM, to package drop rate data; Predicted real-time package drop rate with weather data at the accuracy of 74.0%.
  - **System Design**: Designed project framework, modules and prediction and classification algorithms for possible outage and data package loss during high frequency trading; Visualized the predicting result and retained the final model periodically.

Programming Skills

- **Languages and Tools**: Python, Pytorch, Tensorflow, Keras, Java, C++, C, Swift, Ocaml
- **Coursework**: Data Structures, Numerical Analysis, Algorithms and Computational Models, Graph Theory, Data Mining, Artificial Intelligence, Distributed Systems, Machine Learning, Cloud Computing, Computer Vision, Natural Language Processing