Xiaomeng Li

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Experience

Software Development Engineer 07/2020-present
Amazon.com, Inc. Austin, TX

Machine Learning Intern 05/2019-08/2019
Electronic Arts Inc.(EA), Austin, TX
Service Evaluation Based Web Application with Natural Language Processing

- Translated EA customer and service agent conversation audio files into text using **AWS S3**'s Transcribe function in **Python**. Designed protocols to divide the text into different channels.
- Applied **NLP** model Bert from Google with GPU on AWS EC2 to do sentiment analysis using customer's data as well as IMDB movie review data and achieved 86% accuracy in testing.
- Built a complete website with **Django**, JavaScript and **Vue.js** to allow customer support advisers to log in and view/update the analysis results stored in **MongoDB**. Added Google charts to represent the data distribution in database and posts to allow system news from different users.
- Transplanted the whole website onto **AWS EC2**, used Nginx to connect user from browser to Django and Bert model was applied in backend as a classifier to allow machine learning engineers to upload audio/text files and see the predictions from Bert in real time. Incorporated the AWS Transcribe into the website and used Celery to make Bert run asynchronously.

Applied Machine Learning Research Intern 05/2018-08/2018
Los Alamos National Laboratory (LANL), Los Alamos, NM
Machine learning solutions to revealing the hidden seismicity of Mars (Mentor: Dr. Carene Larmat)

- Applied Fingerprinting to preprocess the Marsquake waveform data and transferred the Fingerprinting results into both Sequence and Image, two perspectives in Deep Learning.
- Built a Convolutional Recurrent Neural Network (CRNN) with **Keras** and **TensorFlow** incorporating both **CNN** and **LSTM**. Adjusted the parameters and structure in CRNN to improve model's performance in finding the waveform where Marsquake events happen. Used time window to separate time-history waveform in order to get training data. Evaluated the model with 10-fold cross-validation and observed the results using confusion matrices.
- Classified both waveform and Fingerprinting data with CRNN and Random Forest. Achieved 80% accuracy on both training and testing stably without overfitting the model.

Research/Teaching Assistant at University of New Mexico 01/2017-04/2018

- Built machine learning models and wrote reports for research project: "Support Vector Machine and Convolutional Neural Network Applications in Dynamic Vision Sensor Data". Teaching Assistant for classes *Engineering Statics (CE 202)* and *Structural Dynamics (CE 521).*

Education

University of New Mexico **08/2018-05/2020**
Master of Science, Computer Science GPA: 3.80/4.0
Doctor of Philosophy, Structural Health Monitoring: Performed one year of study in pursuit of PhD before exiting program and then transferred to Computer Science Department. **06/2017-05/2018**
Johns Hopkins University **08/2015-05/2017**
Master of Science in Engineering, Civil and Systems Engineering
Qingdao Technological University (China) **09/2011-07/2015**
Bachelor of Engineering, Water Supply and Sewerage Engineering

Skills

Languages: Python, Java, C++;
Web Development: Django, PHP, MongoDB, MySQL, HTML/CSS/JavaScript;
Machine Learning: Scikit-learn, Keras, TensorFlow, NLTK;