Zhounan Li

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EDUCATION

University of Florida - Gainesville, FL — May 2021
Master of Computer Science — GPA: 3.89/4.0
Featured courses: Machine Learning, Database Management System, Algorithms

Tongji University - Shanghai, China — June 2019
Bachelor of Computer Science — GPA: 4.37/5.0
Featured courses: Machine Learning, Data Mining, Probability Theory, Algorithms, Data Structure, Python, C++

TECHNICAL SKILLS

- Programming language: Python (NumPy, Pandas, Matlibplot, Seaborn, Pygame, Selenium, Pydub), R, C++.
- Machine learning: Neural Network, Ensemble study, SVM, Clustering Algorithm. Proficient in Sklearn, TensorFlow, and Keras.
- Data analysis: Data cleaning, EDA process, and data visualization.
- Tools: MySQL, NoSQL (Neo4j), AWS Sagemaker, Google Analytics, Tableau, Git, MarkDown.

EXPERIENCE

Dell EMC — Shanghai, China
Data Scientist Intern (Practicum) — June 2018 - July 2018
- Designed a sequence model using LSTM that can recognize the given trigger word in an audio clip to support voice assistant.
- Tuned hyperparameters of the model and trained using the preprocessed audio clips, and finally achieved an accuracy of 91.3%.
- Inserted an alert chime in the corresponding position of the original audio clip when the model predicts positively.

Tongji University — Shanghai, China
Undergraduate Research Assistant — Mar 2018 - Jun 2018
- Constructed and trained an image classification model which can classify the Chest Xray images into 14 classes.
- Plotted an attention heatmap using Grad-CAM to show which part of the image should be paid more attention while classifying.
- Designed a hierarchical neural network with teammates that can recognize motif on a DNA sequence to support genetic research.
- Trained 90 models with different combinations of hyperparameters and achieved an AUC score of 0.76 and AP score as 0.81

PROJECTS

Voice Assistant for Covid-19 Cases Query — Mar 2020
- Design a scrapper using ParseHub which can scrap the coronavirus data from a website and save it as a JSON file for future use.
- Built a voice assistant that can recognize the user's query (return the query result in voice) or update instructions (update the scrapped data using another thread).

Automatic Date Translation with Attention Mechanism — Feb 2020
- Aimed at training a model that can convert any form of date to a standard format (yyyy-mm-dd).
- Constructed a neural network composed of two LSTM layers connected by attention mechanism.
- Achieved an accuracy of 91%. Visualized attention to show which part of the output is looking at which part of the input.

Flappy Bird with Automatic Operation Function using NEAT — Nov 2019
- Realized Flappy Bird game using Pygame in which the player can make the bird jump by clicking the mouse.
- Added automatic operation function using NEAT, which can assess how well each bird adapts to the game, take the best ones to the next round of training, and finally pick the bird which fits the game best as the final solution.

ECG Anomaly Detection with Autoencoder in AWS Sagemaker — Oct 2019
- Constructed an Autoencoder model based on LTSM which can encode each ECG sequence into another sequence.
- Trained the model in AWS Sagemaker using its script mode and achieved a loss of 11.18 on the validation set.
- Deployed the model on Sagemaker and predicted the result by comparing the loss to the threshold, achieve an accuracy of 92.5%