Zizhun Guo

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Zizhunguo.com

EDUCATION

Rochester Institute of Technology - Rochester, NY, USA Expected **May 2021**

Master of Science in **Computer Science**

Relevant Courses: Data Structures and Algorithms, Object-Oriented Programming (Java), Computer Science Theory, Web Service & Service Oriented Computing, Computer Graphics

Big Data Analytics Advanced Certificate

Relevant Courses: Intro to Big Data, Big Data Analytics, Database System Implementation, Independent Study (Text Mining)

Master of Science in **Game Design and Development** Earned May 2018

Relevant Courses: Game Development Processes, Gameplay Prototyping, Artificial Intelligence for Gameplay

Chengdu University of Information Technology - Chengdu, SC, CHINA Earned Jun 2016

Bachelor of Engineering in **Electronic and Information Engineering**

RELEVANT EXPERIENCES

Object Detection Web Application for Traffic/Stop Signs (Python, Tensorflow, OpenCV, Flask, Nginx, Gunicorn, AWS EC2) Feb 2021

- Built an end-to-end Restful Object Detection Web Application using YOLO V3 model that detects the object categories and bounding boxes given an image. It is a fork project regarding the degree Capstone Project
- Trained/Tested the YOLO model on the Stop/Traffic signs subset imported from Google Open Image v6 Dataset
- Adopted transfer learning method on the Darknet-53 backbone feature extractor and re-trained the last 15 layers
- Deployed the neural networks on AWS EC2 at http://3.16.135.19/home
- Employed WinSCP for SFTP and PuTTy for SSH connection

Text Mining for Multiclass Classification based on Yelp User's Reviews (Python, Pandas, Sklearn, NLTK, Genism, Tensorflow, Matplotlib) Aug 2020 – Dec 2020

- Built an python program that detects the category of the restaurant where the user have visited based on its input text review in English
- Preprocessed the Yelp Dataset in Users' and Business' tables by indexing, joining, concatanating, removing stopwords, stemming and lemmatizing from JSON into CSV
- Extracted the word features by conducting TF-IDF, LDA, Embeddings (word2vec: SG & CBOW), Global Vectors(GloVe) textual models.
- Trained/Tested the Machine Learning models LR, SVM, MNB, RF and Neural Networks models like CNN (baseline) and RNN encoder-decoder in LSTM, GRU cells
- Achieved the accuracy to TrainSet 0.99 and ValidSet 0.95 for the CNN model
- Fine-tuned all models by conducting multiple strategies such as hyper-parameters grid search, feature engineering on structural features, feature concatenating with embeddings and regular features, and transfer learning using pretrained textual models

Responsive Web Application Development (HTML, CSS, JS, Node, Express, EJS, Passport, MongoDB) May 2020 - Jul 2020

- Developd a local O2O Business Review website for offline gastronomy review service inspired by Airbnb Experience
- Employed HTML, CSS, JS with Bootstrap and Semantic UI frameworks for front-end page rendering
- Integrated NodeJS environment, Express server framework for back-end system design
- Implemented CRUD functions for creating and reviewing experience on MongoDB using Mongoose framework
- Implemented Users Signup/Login Authorization module using passortJS

Data Analysis System Web Service (Python, Pandas, Sklearn, Flask) Mar 2020

- Built a RESTful web service data analysis system using classification and clustering algorithms on API's description crawled from ProgrammableWeb website
- Vectorized the web services' descriptions using three textual models TF-IDF, LDA and Word2Vec
- Implemented three classifiers including DT, NB and NN; two clustering models using KMeans and DBSCAN
- Evaluated the performances of classifiers using Accuracy, F1 Score and the clusterings Silhouette Coefficient

CERTIFICATE

TensorFlow Developer Certificate (issued by Google TensorFlow Certificate Program) Jan 2021 – Jan 2024

DeepLearning AI. Deep Learning Specialization (issued by Coursera) Jan 2021

SKILLS

Python, Java, C/C++, C#, HTML, CSS, JS, JSON/XML, SQL, Git, Linux, AWS, Cooking, etc.

LAST UPDATE: 3/14/2021