Zizhun Guo

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OBJECTIVE

Full-time Machine Learning Engineer/Data Scientist/Data Engineer position

EDUCATION

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

M.S. in Computer Science

Advanced Certificate: Big Data Analytics

M.S. in Game Design & Development — Earned Aug 2018

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

B.Eng. in Electronic and Information Engineering

RELEVANT COURSEWORKS

Data Structures and Algorithms • Object-Oriented Programming • Intro to Big Data • Big Data Analytics (Data Mining) • Database System Implementation • Web Service & Service Oriented Computing • Independent Study (Text Mining NLP)

TECHNICAL SKILLS

Language: Python, Java, C/C++, C#, Clojure, HTML, CSS, JavaScript, XML, SQL
Database: MySQL, MongoDB, Apache CouchDB, Apache Derby, H2
Framework & Tool: TensorFlow 2.0, Keras, Scikit-learn, Pandas, NumPy, SciPy, Matplotlib, NLTK, Genism, OpenCV, Pyspark, MLlib, Colab, Jupyter Notebook, Visual Studio Code, Emacs, JSON, JQuery, NodeJS, ExpressJS, EJS, Flask, GlassFish, AWS EC2, AWS S3, AWS Lambda, Ubuntu, Git, SourceTree, Bitbucket, GitHub

CERTIFICATE

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

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

RELEVANT EXPERIENCES

TensorFlow based Online Real time YOLO Object Detection Web Service (http://3.16.135.19/home) — Feb 2021

- Implemented the end-to-end YOLO v4 web service with Python, TensorFlow Keras, OpenCV, Flask, AWS EC2 for Traffic/Stop signs detection
- Adopted pre-trained model CSPDarknet-53-tiny backbone feature extractor and re-trained Head 15 layers for binary classes regression
- Fitting/Testing the TensorFlow model on Google Open Image v6 subset
- Developed the full stack with Flask, HTML, CSS3, Bootstrap 4 for UI to demonstrate scores and bounding boxs
- Deployed the Flask based service on AWS EC2 with Gunicorn, Nginx for load balancer, WinSCP, PuTTy for instance SFTP/SSH connection.

TensorFlow & Scikit-learn based Yelp Dataset Category Text Mining Service — Aug 2020 – Dec 2020

- Implemented the program with Python, Apache Spark, Pandas, Scikit-learn, TensorFlow for the machine learning pipeline.
- Conducted data ingestion by indexing, joining, groupby, aggregation with Pyspark, Pandas, Numpy
- Implemented text data preprocessing with NLTK Stem, NLTK Corpus Reader for stopwords removal, text lemmatization and stemming
- Created textual models TF-IDF, LDA, Word2Vec SG & CBOW, GloVe on User's Reviews with Scikit-learn, Gensim, Standford Glove
- Fitted/transformed ML models LR, SVM, MNB, RF, CNN, RNN encoder-decoder GRU & LSTM cells with Scikit-learn, TensorFlow 2.0 Keras
- Fine-tuned models by hyper-parameters grid search in Scikit-learn, adopted Pretrained models GloVe42b300d, Google word2vec
- Implemented data visualization with Matlibplot and achieved the accuracy to TrainSet 0.99 and ValidSet 0.95 for the CNN model

NodeJS based Responsive Web Application Development — May 2020 - Jul 2020

- Developed the web application with JavaScript, NodeJS, MongoDB for online vendors posting food tours
- Implemented the frontend with HTML, CSS3, JQuery, Bootstrap, SemanticUI and Bulma
- Integrated NodeJS based backend with ExpressJS, EJS and Mongoose
- Implemented Users Authentication module using passortJS and Morgan as logger middleware

Scikit-learn based Data Analysis System Web Service — Mar 2020

- Implemented the web service with Python, Pandas, Scikit-learn, Flask, CouchDB for an online real-time end to end ML models analysis
- Developed the Python based Web Crawler with bs4 BeautifulSoup, urllib request, re for studying API info from PragrammableWeb
- Implemented text data preprocessing with NLTK Stem, NLTK Corpus Reader for stopwords removal, text lemmatization and stemming
- Created textual models TF-IDF, LDA, Doc2Vec DBOW on API's descriptions with Scikit-learn, Gensim
- Fitted/transformed DT, K-NN, NB classifiers and clustering models KMeans DBSCAN with Scikit-learn
- Developed the full stack with Flask, HTML, CSS3, Bootstrap 3 for UI and CouchDB for storing evaluation results