

# Zizhun Guo

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## OBJECTIVE

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

## EDUCATION

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Rochester Institute of Technology - Rochester, NY, USA

Expected May 2021

M.S. in Computer Science - GPA: 3.44

Advanced Certificate: Big Data Analytics - GPA 3.75

M.S. in Game Design and Development - GPA: 3.28

Earned Aug 2018

Chengdu University of Information Technology - Chengdu, SC, CHINA

Earned Jun 2016

B.Eng. in Electronic and Information Engineering - GPA: 3.14

## CERTIFICATE

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TensorFlow Developer Certificate (issued by Google TensorFlow Certificate Program)

Jan 2021 – Jan 2024

DeepLearning AI. Deep Learning Specialization (issued by Coursera)

Jan 2021

## TECHNICAL SKILLS

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**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

## RELEVANT EXPERIENCES

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**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 boxes
- Deployed the Flask based service on AWS EC2 with Unicorn, 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, Stanford 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 Matplotlib 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 passportJS 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 ProgrammableWeb
- 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

## RELEVANT COURSEWORKS

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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)

LAST UPDATE: 4/6/2021