Zhuochun Li

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Education

University of Pittsburgh Jan 2021 – Dec 2022
Master of Science in Information Science, GPA: 3.9/4.0 Pittsburgh, U.S.
School of Computing and Information (SCI)

Xi'an University of Technology Sep 2016 – Jul 2020
Bachelor of Engineering in Computer Science Xi'an, China

Research Interests

My research interests include **Natural Language Processing** (NLP), **Information Retrieval** and **Machine Learning** in NLP tasks.

Publications

SiaKey: A Few-shot Learning Method for Clinical Natural Language Processing
Zhuochun Li, Khushboo Thaker, Daqing He.
EACL 2023 (Under review)

Public Safety Crisis Recognition Based on Bi-LSTM+Attention
Zhuochun Li, Zhixiao Wang, Wenyao Yan.
Computer technology and development 2022.

Academic Experience

Research Assistant, iRiS Lab at University of Pittsburgh May 2022 – Present
Mentored by the Director, Prof. Daqing He and collaborated with Ph.D. students. *Pittsburgh, U.S.*

- Conducted the project of Ovarian Cancer Forum, which was cooperated with the School of Nursing.
- Studied few-shot learning methods in the application of text classification and recommendation system.
- Achieved average accuracy 60% by 10-shot training on Siamese Networks, which surpassed BioBert performance on this task.

Computer Vision - 16-720A, Carnegie Mellon University Jan 2022 - Apr 2022
Completed the Computer Vision course with grade "A" taught by Prof. David Held of CMU *Pittsburgh, U.S.*

- Learned technologies about Spatial Pyramid Matching, Planar Homographies and Lucas-Kanade Tracking.
- Contributed to tasks about 3D Reconstruction, Neural Networks for Recognition and Photometric Stereo.
- Comprehended the cutting-edge deep learning models such as GAN, VAE and Transformers.

Domestic Violence Crisis Recognition Project Jan 2020 - Jul 2020
Implementation of Domestic Violence Crisis Recognition Method based on Deep Learning *Xi'an, China*

- Related paper has been published in journal "Computer Technology and Development" in April 2022.
- Collected 1654 posts related to Domestic violence and built 50-dimensional word vector via Word2Vec.
- Constructed CNN, RNN, LSTM, Bi-LSTM+self-Attention neural network models to accomplish text categorization task, Bi-LSTM+self-Attention model had the best performance, with accuracy rate of 90.22% and recall rate of 93.98%.

Researcher, Intelligent Chat Bot Design Jul 2019 - Aug 2019
*Research supervised by Fan Zhang from the **Massachusetts Institute of Technology*** *Remote*

- Trained text dataset containing over 1000 sentences and achieved accuracy rate of 80% utilizing rasa_nlu.
- Interpreted intentions from user stock queries and supported over 100 daily dialogue occasions by spaCy.
- Enabled users to acquire expected stock information within 1.5 seconds and deployed the bot on Wechat.

Awards

Outstanding Undergraduate Thesis Award (2020)
Third Prize Scholarship for Excellent Academic Performance (2018)

Industrial Experience

AI Intern, MEDA AI May 2022 - Aug 2022

Internship with Startup Half Moon Tech to work on the Meda Metaverse project. *Remote, U.S.*

- Improved the text to speech (TTS) model based on Tactron and built server to train model over 10M steps.
- Assisted constructing 3D character model and got average accuracy over 85% on facial attributes classification task on dataset CelebA.
- Developed API for integrating with backend services and maintained Linux servers.

Software Engineering Intern, Pactera Technology May 2021 - Aug 2021

Design and Development of Intelligent Customer Service System *Wuhan, China*

- Conducted field surveys over 100 customers, assisted designing database E-R model containing 34 tables.
- Contributed more than 20 web page interface implementation for different service requirements of clients.
- Developed online semantic analysis system using Baidu voice recognition API with 80% code coverage.

Skills

Programming Language/Platform: Python (main), C, C++, JAVA, SQL, MySQL, Linux, AWS, Matlab.

Tools: GIT, Anaconda, Tensorflow, Pytorch, Keras, Numpy, Scikit, OpenCV, Spacy, Rasa_nlu, Word2Vec, BERT.