JIAZHAO LI

1839 Shirley Ln, Ann Arbor, MI. 48105
(+1)734 604 1596, jiazhaol@umich.edu

EDUCATION

University of Michigan U.S *Sept. 2017 – Apr. 2019*
M.S in Electrical Computer Engineering GPA: 3.826
Nankai University China *Sept. 2013 – June. 2017*
B.S in Electrical Engineering

RESEARCH EXPERIENCE

Prescription-Pharmacy Transcription June 2019 - Now
Research Specialist *NLP4Health Group, University of Michigan*

- Normalized drug-related concepts extracted from prescription/ pharmacy instruction using name-entities recognition deep learning model to reconstruct machine generated instruction.
- Developed an online Web application to do the survey towards pharmacists to evaluate the difference between machine and manually generated instruction results.
- Developing a new end-to-end sequential model on Prescriber-Pharmacist instruction translation.

Identify Medication Relations from Clinical Narratives Nov. 2018 - Mar. 2019
Research Assistant *NLP4Health Group, University of Michigan*

· Identifying medication relations between drugs and associated attributes automatically from clinical narratives to develop advanced tools for decision support.

- Trained medical domain word embedding using word2vec on 50k+ MIMICIII EHRs.
- Embedded sentences with part-of-speech tag, named-entities-recognition tag, pre-trained token embedding and bi-direction relative position of target entities pair.
- Developed and compared classifiers among SVM, Random Forest, CNN, Bi-LSTM (Best).

Baby blues: Analyzing Facebook and health forums on Pregnancy Aug. 2018 - Sept. 2018
Researcher Assistant *NLP4Health Group, University of Michigan*

- Summarized top10/20 keywords of posts with LDA model and theme distribution of posts with pre-defined theme word sets in different trimesters and datasets.
- Compared between and within two platforms in keyword and theme in trimester level using Jaccard coefficient and Kendalls coefficient.
- Facebook is chosen as a self-expression place to seek emotional support while health forum serves as professional information provider.

Attention Based CNN: Sentiment Analysis for Yelp Reviews Sept. 2018 - Dec. 2018
Nature Language Processing Course Project *University of Michigan*

- Embedded 5M yelp review text with pre-trained word embedding, POS tag and relative prosition.
- Developed classifier with N-gram convolutional layer and the attention-based fully connected layer.
- Achieved high performance compared with LSTM architecture.

Video Segment Retrieval System Sept. 2018 - Dec. 2018
Information Retrieval Course Project *University of Michigan*

· Using free text query to retrieve video segment from video datasets.

- Developed attention-based embedding for video frames and formed video free text description pair.
- Developed Field-Weighted Factorization Machine embedding layer for video-description pair.
- Developed fully connected layer for classification and retrieval ranking based on similarity.

SELECTED PROJECTS

PageRank++: European Soccer Team Ranking Prediction Jan. 2018 - Apr. 2018
Best poster of Graph Data Mining Course Project *University of Michigan*

· Designing PageRank++ algorithm to make a prediction on match result, where we redefined the meaning of edge in data graph.

- Using K-means to cluster players and defining a new criteria in evaluating player and team performance.
- Using PageRank iteration to predict rank with nodes representing feature vector of scores of players component for each team and edges of graph representing probability of win (directed).

Vision-based human-computer interaction game Nov. 2017 - Dec. 2017
Highest score project of Computer Vision course *University of Michigan*

- Developed hand-tracking architecture with ORB oriented descriptor matching batch picture in hand with video image captured by laptop camera.
- Designed Brick Breakers game where the movement of broad is controlled by hand.

PUBLICATIONS

Jiazhao Li, VG Vinod Vydiswaran, Jinghui Liu. *Neural Network Models to Identify Medication Relationsfrom Clinical Narratives.* MLHC 2019 (submitted)
V.G.Vinod Vydiswaran, Shibamouli Lahiri, Hyeon Joo, Jinghui Liu, Jiazhao Li, Xinyan Zhao, Nabarup Maity, Farhan Siddiqui, Tanmay Basu *Developing Feature-rich Supervised Models to Extract Medication Information and Adverse Events from Clinical Narratives.* JAMIA 2019 (submitted)

WORK EXPERIENCE

Research Assistant	NLP4Health Group	Prof. VG Vinod Vydiswaran
Teach Assistant	Information Retrieval	Prof. Rada Mihalcea

SKILLS

Languages	Python, JavaScript, HTML, Julia, Matlab, SQL, C++,
Framework/OS	Tensorflow, PyTorch, Hadoop, Linux

HONORS AND AWARDS

- Apr. 2018. Best poster of Graph Data Mining Course Project.
- Dec. 2017. Highest score project in Computer Vision Course
- Sep. 2016. Third Prize Scholarship of the University (10%), NKU
- Sep. 2016. Merit Student of the University (5%), NKU
- Oct. 2015. Outstanding Project of the National Undergraduate Electronic Design Contest.