

XINYI ZHENG (CAROL ZHENG)

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EDUCATION

University of Michigan, Ann Arbor, MI

Sept. 2017—Apr. 2020

Bachelor of Science in Computer Science, Mathematical Science (Algorithm Track)

GPA: 3.88 / 4.00

Coursework: Natural Language Processing(grad), Operating Systems, Machine Learning, Optimization Methods (grad), Computer Organization, Database Management Systems, Data Mining, Data Structure and Algorithms, Numerical Methods

Shanghai Jiao Tong University, Shanghai

Sept. 2015—Aug. 2020

Bachelor of Science in Engineering in Electrical and Computer Engineering

PROFESSIONAL EXPERIENCE

Michigan Database Research Group, Ann Arbor, MI

Apr. 2018 - Present

Research Intern, Hybrid Question Answering System, advised by Prof. H.V. Jagadish

- Design and implement a novel heuristic algorithm for query graph based multi-constraint semantic parser, and get 95% parsing accuracy on *ComplexQuestions* (Bao et al., 2016)
- Transfer natural language question into sub-queries for Open Knowledge Base with ElasticSearch, build SPARQL for RDF knowledge graph
- Design a search-based weakly supervised framework for joint inference on Entity Linking, Relation Extraction and Information Retrieval, and do representation learning for hybrid question answering

Michigan Institute for Data Science, Ann Arbor, MI

Mar. 2018 – Present

Research Assistant, Analytics for Learners as People (LEAP), advised by Prof. Rada Mihalcea

- Implemented a twitter crawler and collected 100k text and image data of student volunteers, constructed a stream for social media activities
- Conduct Sentiment analysis on text social media, and mining relationship between students' texts and mental state
- Use LDA topic model and LIWC lexicon to analyze social media data based on different criterions, build an ensemble classifier and get ~70% accuracy on depression state prediction based on social media information
- Designed an Instagram crawler, and wrapped it up as a command line application

Sinolink Securities, Shanghai

Dec. 2016 - Feb. 2017

Software Engineer Intern

- Conducted data-preprocessing with MySQL, including filtering useless data and labeling data
- Constructed an automatically news detection and classification module in Public Opinion System, using JIEBA to classify text in Chinese, capture keywords, and analyze mood in news texts
- Selected data and review selected data for project manager based on clients' requirement

PROJECTS

School of Information (UMSI), Ann Arbor, MI

Feb. 2018 – Present

Understanding How Social Relationships Affect Information Diffusion, advised by Prof. David Jurgens

- Clean data on more than 200M social relationships, filter mistakenly annotated data based on keyword extraction and verify with web crawler results
- Construct data visualization infrastructure based with Bootstrap Algorithm, Matplotlib and Seaborn
- Train classifiers on social relationships based on topics, reciprocity, time series features, etc

University of Michigan, Ann Arbor, MI

Dec. 2017 – Jan. 2018

Chinese news search engine with recommendation system based on JIEBA, Flask

- Extracted URL, analyzed HTML and constructed web crawler based on XML and BeautifulSoup
- Constructed index system with SPIMI-INVERT algorithm, used TFIDF model to select news posts, and built recommendation system based on JIEBA text classification and keyword extraction
- Built a web search engine based on flask, supporting news searching and ranking selection

Industrial and Operation Engineering, University of Michigan, Ann Arbor, MI

Jan. 2018 - Mar. 2018

Bundled Payment vs. Fee-For-Service: Impact on Active Surveillance of Low Risk Prostate Cancer, advised by Prof. Brian Denton

- Developed rationally assumption, objective function and constraints for a Hidden Markov Model(HMM) on Low-Risk Prostate Cancer treatments
- Simulated the HMM with Viterbi algorithm, tuned the hyperparameters and optimize ~20% expenses for Prostate Cancer Patients according to JHU Prostate Cancer Database

LEADERSHIP

Michigan China Forum, Ann Arbor, MI

Nov. 2017 – Present

President of Liaison Department

- Apply for Student Activity Funding on Campus to raise money for Michigan China Forum
- Outreach companies that are related to Michigan China Forum in different aspects, and collaborate with them to get funding
- Keep accounts, collect budgets and approve expenses

Xuebacoming Inc., Shanghai

June. 2015 – Oct. 2015

Co-founder

- Designed API on Wechat Platform, including automatic response and matching resources
- Led the Investment Department and got Angel-round investment from *Juntai Partner*

SKILLS

Programming Languages: C/C++, Java, Python, Matlab, Html/CSS, MySQL, LaTeX

Framework: Git, Tensorflow, Flask, CoreNLP, Mallet, ElasticSearch, NLTK

AWARDS AND HONORS

3rd place, Bloomberg Coding Challenge, University of Michigan, MI

Nov. 2017