Zhe Xu

Arizona State University
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EDUCATION

Arizona State University (ASU), Tempe, AZ, US Aug.2018 – Present

- **Ph.D. student in Computer Science**
  GPA: 4.0/4.0, Core Courses: Principle of Programming Language (4.3/4.0), Operating System (4.0/4.0)

Fudan University (FDU), Shanghai, China Sep.2014 – Jul.2018

- **B.E. in Electronic Engineering**
  Computer-Related GPA: 3.77/4.0, awarded 2016&2017 Fudan Excellent Undergraduate Scholarship.
  Core Courses: Computer Architecture/Python programming/Probability Theory/Microcomputer Architecture and Interfacing Experiments (4.0/4.0), Information Theory (3.7/4.0), C/C++ (3.3/4.0)
- **Minor: Data Science**
  Core Courses: Data Structure, Design and Analysis of Algorithms, Introduction to Database Systems

PUBLICATION

- **Zhe Xu**, Hanghang Tong, "Ranking on Network of Heterogeneous Networks", in submission.
- Jiaqing Liang, **Zhe Xu**, Yanghua Xiao, "Incorporating Complicated Rules into Deep Generative Models", in submission.
- Haiyun Jiang, **Zhe Xu,** Yanghua Xiao, Deqing Yang, Wei Wang, "Relation Extraction: From the Perspective of Implicit Relation Reasoning", in submission.
- Haiyun Jiang, Yanghua Xiao, **Zhe Xu**, Deqing Yang, Wei Wang, "Hierarchical Conceptual Labeling", in submission.

RESEARCH PROGRAMS

Data Laboratory | Research Associate
Research Direction: Graph Mining
Advisor: Dr. Hang-Hang Tong, Associate Professor at School of Computing, Informatics, and Decision Systems Engineering, Arizona State University

Ranking on Network of Heterogeneous Networks Aug.2018 – Present

- Proposed a new model which is a network of Heterogeneous Information Networks and ran different ranking algorithms on it to testify its effectiveness and efficiency.

Shanghai Key Laboratory of Data Science | Research Assistant
Research Direction: Knowledge Graph, Relation Extraction
Advisor: Dr. Yang-Hua Xiao, Associate Professor at School of Computer Science, Fudan University

Incorporating Complicated Rules into Deep Generative Models Mar.2017 – Jan.2018

- Proposed a general framework containing a Rule Discriminator concatenated with Generator.
- Experimented with various generative tasks like Hand-written Digits Generation, Text Generation, and Conditional Chinese Question Generation.

Relation Extraction: From the Perspective of Implicit Relation Reasoning Feb.2017 – Jan.2018

- Constructed a new dataset from Wiki and Freebase, filtered noisy patterns and sentences.
- Proposed a Relation Extraction model based on implicit relation reasoning by mining the statistical information of surface patterns and added priori knowledge to guide the learning of model.

Classical Chinese Poetry Generation Dec.2016 – Feb.2017

*Baseline by Jia-Qing Liang, Ph.D. at School of Computer Science, Fudan University.

- Improved model by adding part of speech information crawled from online dicts and gave every word with related topics which are determined by a Co-occurrence Graph constructed from corpus.

Graduate Project: Comments Generation Jan.2018 – Jul.2018

- Modified Transformer model and used data crawled from Taobao to generate comments according to specific topics and preference.

Entity Typing with DNN and Word Embedding Apr.2017 – Sep.2017

*Baseline by Li Dong, Fu-Ru Wei, etc. A Hybrid Neural Model for Type Classification of Entity Mentions. In IJCAI, 2015.

- Used Bidirectional LSTM and added character-level Word Embedding.
- Improved Ma-F1 and Mi-F1 score effectively on dataset: Wiki, OntoNotes, and BBN.

Hierarchical Conceptual Labelling Dec.2016 – Jan.2018

- Replaced BoW (Bag of Words) by hierarchically structured conceptual labelling based on Bayesian Rose Trees. Proposed a denoising step based on an empirical formula.

Investment Consultant System Sep.2016 – Oct.2016

- Constructed a financial product database from online investment platform.
- Developed a financial Investment consultant system supporting Chinese natural language input.

Innovation Project: Dynamic Gesture Recognition | Team Member Jul.2016 – May.2017

Advisor: Xiao-Dong Gu, Prof. at School of Information Science and Technology, Fudan University

- Proposed and tried two solutions. Solution 1: Used HMM as classifier with specific features like barycenter of your hand, positions of five fingers, etc. Solution 2: Used LSTM with CNN as classifier.

SOCIAL EXPERIENCE

Algorithm Engineer Intern | Search Department, Alibaba Group. China Jul.2018 – Aug.2018

- As a team member to construct E-commerce knowledge graph.
- Developed algorithm to mine 'Defining Feature' of some groups of items.

Market Research Intern | Inchcape Plc. China Jul.2016 – Aug.2016

- Crawled online wheel hub dealers' information to assist market research nationwide.

Volunteer Teacher

- Taught primary school students in Yunnan Province, China. Jul.2015 – Aug.2015
- Taught high school students in Hubei Province, China. Dec.2014 – Jan.2015

SKILLS AND OTHERS

Language: Chinese (native), English
Programming Languages: Python, C/C++, Assembly, JAVA, VB, HTML/CSS/JS, Verilog
Tools: Keras, TensorFlow, OpenCV, MATLAB, LaTex, MySQL, MongoDB, Git, SPSS