Mengying Zhou

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EDUCATION

2019.9 - Present **Ph.D. Student**, *School of Computer Science*, Fudan University.
Advisor: **Prof. Xin Wang**, **Prof. Yang Chen**

2015.9 - 2019.6 **Bachelor's Degree (with honor)**, *School of Information Science and Engineering*, Lanzhou University.
GPA:4.8/5.0 | Ranking: 1/190

RESEARCH INTERESTS

- Machine Learning for Networking Systems (NetAI)
- Next-Generation Internet Architecture
- Social Network Analysis

PUBLICATIONS

1. Tiancheng Guo, Yuke Ma, **Mengying Zhou**, Xin Wang, Jun Wu, Yang Chen. *SocialCache: A Pervasive Social-Aware Caching Strategy for Self-Operated Content Delivery Networks of Online Social Networks.* Proc. of 2023 IEEE International Conference on Communications (ICC23), Rome, Italy, May 2023.

2. Run Huang, **Mengying Zhou**, Tiancheng Guo, Yang Chen. *Locating CDN Edge Servers with HTTP Responses.* Proc. of ACM SIGCOMM (SIGCOMM22), Demo Session, Amsterdam, Netherlands, Aug. 2022. **(First Place of the undergraduate division in ACM Student Research Competition)**

3. Xuebing Li, Yang Chen, **Mengying Zhou**, Tiancheng Guo, Chenhao Wang, Yu Xiao, Junjie Wan, and Xin Wang. *Artemis: A Latency-Oriented Naming and Routing System.* IEEE Transactions on Parallel and Distributed Systems (TPDS), 2022, 33(12):4874-4890.

4. **Mengying Zhou**, Zheng Li, Shihan Lin, Xin Wang, Yang Chen. *FlexHTTP: An Intelligent and Scalable HTTP Version Selection System.* Proc. of the 2nd workshop on Machine Learning and Systems (EuroMLSys'22), co-located with EuroSys'22, France, Apr. 2022.

5. **Mengying Zhou**, Tiancheng Guo, Yang Chen, Junjie Wan, Xin Wang. *Polygon: A QUIC-Based CDN Server Selection System Supporting Multiple Resource Demands.* Proc. of the 22nd ACM/IFIP Middleware Conference (Middleware'21), Industry Track, Virtual Event, Canada, Dec. 2021.

6. Xuebing Li, Yang Chen, **Mengying Zhou**, Xin Wang. *Internet Data Transfer Protocol QUIC: A Survey.* Journal of Computer Research and Development, 2020, 57(9):1864-1876.

7. Jiaxin Tang, Yang Chen, **Mengying Zhou**, Xin Wang. *Deep Learning for POI Recommendation: A Survey.* Computer Engineering, 2021, 1000-3428.0061598.

RESEARCH EXPERIENCE

Present **Machine Learning-based Network System with Effectiveness and Efficiency**, *Fudan University*.
Advisor: Prof. Yang Chen, School of Computer Science

- Analysis find that different network conditions and web page structures affect the transmission performance difference between QUIC and TCP.
- Responsible for building a machine learning-based model to select the optimal protocol under different network conditions and web content.
- Experimental results show that the average page load time of the adaptive hybrid protocol system is shorter than that of the single protocol system.

Present **User Awareness-based Next-generation Network Structure**, *Fudan University*.
Advisor: Prof. Yang Chen, School of Computer Science

- It is necessary to dynamically adjust the network conditions according to user needs.
- Responsible for building an selection system that provides the most suitable network parameters.
- Emulation results show that meeting dynamic needs can improve system resource utilization.

Present **Understanding the Behavioral Differences Between Users with Different Loyalty on Airbnb**, *Fudan University*.
Advisor: Prof. Yang Chen, School of Computer Science

- Analysis find that there are behavior differences between users with different loyalty
- Responsible for establishing a deep learning model, DeepChurn, that predicts whether a user is a loyal user based on the user's behavior preference.
- DeepChurn's prediction performance is superior than the SOTA models' 0.2 accuracy

Present **Data-Driven Management Platform for Social Non-profit Organizations**, *Tsinghua University*.
Advisor: Prof. Jar-der Luo, Department of Sociology

- Provide electronic management tools for non-profit social organizations.
- Responsible for the development of WeChat mini programs and an online system for analyzing the activity patterns of members of social organizations.
- This system has been deployed and used on a large scale in Chengdu.

2020.6 - 2020.12 **Teaching Assistant - Network Analytics Course**, *New York University Shanghai*.
Advisor: Prof. Bruno Abrahao, Center for Business Education and Research

- Assist teachers to carry out teaching activities.
- Responsible for some teaching tutorials.

2018.9 - 2019.4 **Machine Learning-Based Headline Prediction**, *Lanzhou University*.
Advisor: Prof. Rui Zhou, School of Information Science and Engineering

- Analysis find that the influence of headline is determined by news content.
- Responsible for constructing a deep learning classification framework for judging whether news can become headlines.
- Experiments show that the model can accurately classify headlines and non-headlines.

2018.7 - 2018.8 **Embeddings of Knowledge Graphs and Entity Descriptions for Cross-lingual Entity Alignment**, *Zhejiang University*.
Advisor: Prof. Weiming Lu, College of Computer Science and Technology

- Limited by the low degree of entity alignment between different language knowledge graphs, the accuracy of cross-lingual reasoning is often not satisfactory enough.
- Combining the textual description of entities, we propose an embedded model to align the two types of knowledge graphs between Chinese and English.
- The model reach 29% of Rank@1 hit rate and 73.8% of Rank@10 hit rate on the test set.

2017.7 - 2017.8 **Research Intern**, *IDG McGovern Institute for Brain Research*, Peking University.

AWARDS & HONORS

2020 The 2nd "Huiyuan Sharing" National University Open Data Innovation Research Competition, First Price (2/198)

2020 SODA Shanghai Open Data Innovation Application Competition, Third Price (4/351)

2019 National Undergraduate Training Program for Innovation and Entrepreneurship, Lanzhou University

2019 Outstanding Graduate, Lanzhou University (Top 1%)

2018 Chinese National Scholarship, Lanzhou University (Top 1%)

2016 First Class Scholarship for Outstanding Students in Lanzhou University (Top 5%)

TECHNICAL SKILLS

Programming Languages	Python, C/C++, Java(Android), HTML/CSS, JavaScript, MATLAB
Deep Learning Framework	PyTorch, Tensorflow, Keras, Scikit-learn, PaddlePaddle
Platforms	Emulab, Google Cloud Platform, WeChat Mini Program
Others	SNAP, NetworkX, SQL, LaTeX, Git

EXTRACURRICULAR EXPERIENCE

2016 - 2018 Open Source Community of Lanzhou University, Chairman

2016 - 2018 Google Developer Groups of Lanzhou University, Chairman