

Mengying Zhou

Mobile Systems and Networking Group

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No. 2005 Songhu Road, Shanghai, China

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

- **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.
- **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.
- 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.
- 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, L^AT_EX, Git

EXTRACURRICULAR EXPERIENCE

2016 - 2018 Open Source Community of Lanzhou University, Chairman
2016 - 2018 Google Developer Groups of Lanzhou University, Chairman