

# Mengying Zhou

*Big Data and Networking Group*

*School of Computer Science  
Fudan University*

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<https://mengyingzhou.github.io>

## EDUCATION

- 2019.9 - Present **Ph.D. Student**, *School of Computer Science*, Fudan University.  
Advisor: **Prof. Xin Wang**, **Prof. Yang Chen**
- 2022 - 2023 **Scholarship Visiting Student**, *Dept. of Engineering Systems and Services*, TU Delft, Netherlands.  
Advisor: **Prof. Aaron Ding**
- 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 and Protocol
- Communication Energy

## 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.
- 2020.6-2021.2 **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
- 2019.9-2021.6 **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.**

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## SERVICES

- Program Committee: China National Conference on Big Data and Social Computing: 2023
- Technical Program Committee (TPC) Member: ACM Internet Measurement Conference: 2022(Shadow), EuroMLSys: 2023

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## 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%)

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## 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 <sup>A</sup> T <sub>E</sub> X, Git

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## EXTRACURRICULAR EXPERIENCE

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