# Fanghua Ye

fanghua.ye.19@ucl.ac.uk

## EDUCATION

**University College London (UCL), United Kingdom**    Dec. 2019 - Now
PhD in Computer Science, Advisor: Prof. Emine Yilmaz

**Sun Yat-Sen University (SYSU), China**    Aug. 2016 - Jun. 2019
MPhil in Computer Science, Advisor: Prof. Zibin Zheng

**University of Electronic Science and Technology of China (UESTC), China**    Sep. 2012 - Jun. 2016
Bachelor in Computer Science, Yingcai Honors College

## RESEARCH INTERESTS

Conversational Artificial Intelligence (Task-Oriented Dialogue Systems, Conversational Question Answering, Conversational Dense Passage Retrieval), Neural Language Modelling, Neural Semantic Parsing, Natural Language Processing, Graph Neural Networks, Social Network Analysis

## WORK EXPERIENCE

**Amazon Alexa AI, Cambridge, United Kingdom**    Jul. 2021 - Sep. 2021
*Applied Scientist Intern; Project: Bootstrap Ontology for Semantic Question Answering*

- The goal was to discover meaningful new ontology from open data resources to enable knowledge-based question answering systems to answer more questions without human in the loop.

- We leveraged a bunch of techniques including open information extraction, neural semantic parsing, clustering, entity resolution and question answering to deal with this problem.

- Empirical results demonstrated that more questions could be answered using the discovered new ontology.

**National University of Singapore, Singapore**    Feb. 2019 - May 2019
*Research Assistant; Project: Fast and Accurate Community Detection*

- We tried to apply nonsmooth nonnegative matrix factorization for community detection and proposed a novel community detection method coined autoencoder-like deep sparse nonnegative matrix factorization. We further implemented an efficient learning algorithm with linear time complexity to optimize the proposed approach.

**Tencent WeChat Group, Guangzhou, China**    Apr. 2017 - Mar. 2018
*Research Intern; Project: Community Detection on Ego-Networks*

- The task was to detect the community structures on the ego-networks of WeChat users to facilitate downstream applications, for example, advertising and recommendation.

- We considered multiple features such as friendships, demographics and official accounts, and fused these features under the multi-view learning framework to detect communities accurately.

## SELECTED PUBLICATIONS

### Preprints

- **Fanghua Ye**, Jarana Manotumruksa, and Emine Yilmaz. "MultiWOZ 2.4: A Multi-Domain Task-Oriented Dialogue Dataset with Essential Annotation Corrections to Improve State Tracking Evaluation." *arXiv preprint arXiv:2104.00773*.

### Conference Papers

- **Fanghua Ye**, Yue Feng, and Emine Yilmaz. "ASSIST: Towards Label Noise-Robust Dialogue State Tracking." In *Findings of the Association for Computational Linguistics: ACL* (**Findings of ACL**), 2022.

- **Fanghua Ye**, Jarana Manotumruksa, Qiang Zhang, Shenghui Li, and Emine Yilmaz. "Slot Self-Attentive Dialogue State Tracking." In *The Web Conference* (**WWW**), 2021.

- **Fanghua Ye**, Zhiwei Lin, Chuan Chen, Zibin Zheng, and Hong Huang. "Outlier-Resilient Web Service QoS Prediction." In *The Web Conference* (**WWW**), 2021.

- **Fanghua Ye**, Chuan Chen, Zibin Zheng, Rong-Hua Li, and Jeffrey Xu Yu. "Discrete Overlapping Community Detection with Pseudo Supervision." In *IEEE International Conference on Data Mining* (**ICDM**), 2019.

- **Fanghua Ye**, Chuan Chen, and Zibin Zheng. "Deep Autoencoder-Like Nonnegative Matrix Factorization for Community Detection." In *ACM International Conference on Information and Knowledge Management* (**CIKM**), 2018.

- Rong-Hua Li, Lu Qin, **Fanghua Ye**, Jeffrey Xu Yu, Xiaokui Xiao, Nong Xiao, and Zibin Zheng. "Skyline Community Search in Multi-Valued Networks." In *ACM International Conference on Management of Data* (**SIGMOD**), 2018.

## AWARDS

- Amazon Alexa Prize TaskBot Challenge Research Grant ($250,000)                                      2021
- UCL Research Studentship (Four Years' Full Scholarship)                                      2019 - 2023
- National Postgraduate Scholarship, Ministry of Education                                      2018
- National Postgraduate Scholarship, Ministry of Education                                      2017

## SKILLS

- **Software**: Python, C/C++, Pytorch, TensorFlow, MATLAB, etc
- **Languages**: Manderin (native), English (fluent)

## ACADEMIC SERVICES

### Conference Program Committee Member

- SIGIR 2022, DialDoc@ACL 2022, KDD 2022, WSDM 2022, AAAI 2021-2022, CIKM 2021, etc