XINYUE ZHANG

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EDUCATION

Southeast University   **Nanjing, China**
B.S. in Electronic Science and Engineering   Sept. 2017 to July 2021 (expected)

- GPA: 86/100.
- Joined the Knowledge Graph Research Group in Sept. 2019, supervised by Prof. Meng Wang.
- Relevant Courses: Linear Algebra (I got **100/100** and a **scholarship** for this course), Advanced Mathematics (90/100), Programming and Algorithmic Language (C/C++) (95/100), Computer Architecture and Logic Design, Probability Statistics and Stochastic Processes, Computer Network, Microcomputer Systems and Interfaces, Academic Writing, etc.

Imperial College London   **London, Britain**
Data Science Summer School (held by Prof. Yike Guo)   July 2019 to Aug. 2019

- Relevant Courses: Introduction to Artificial Intelligence, Data Science, Academic English, etc.

PUBLICATIONS

- **Xinyue Zhang**, Meng Wang, Muhammad Saleem, Axel-Cyrille Ngonga Ngomo, Guilin Qi, and Haofen Wang. Revealing Secrets in SPARQL Session Level. *International Semantic Web Conference (ISWC) 2020*. (Research full paper) [PDF]
- **Xinyue Zhang**, Meng Wang, Bingchen Zhao, Ruyang Liu, Jingyuan Zhang, Han Yang. Characterizing Robotic and Organic Query in SPARQL Search Sessions. *Asia Pacific Web and Web-Age Information Management Joint International Conference on Web and Big Data (APWeb-WAIM) 2020*. (Research full paper) [PDF]
- Meng Wang, Kefei Chen, **Xinyue Zhang**, Hongxu Chen, Sen Wang, Gang Xiao. Explaining Similarity for SPARQL Queries. *World Wide Web Journal*. (Submitted)

RESEARCH EXPERIENCE

Explaining Similarity for SPARQL Queries   **Nanjing, China**
Supervised by Prof. Meng Wang   May 2020 to Nov. 2020

- We aimed to provide explanations for typical SPARQL similarity measures. Given similarity scores of existing measures, we implemented explainable models based on four regression models to provide quantitative weights to different dimensional SPARQL features, i.e., we explained different kinds of SPARQL similarity computation models by presenting the weights of different dimensional SPARQL features captured by them.
- I mainly worked on implementing SPARQL similarity computation models, as well as conducting rudimentary data analysis of similarity features in real-world query analysis, for example, the distribution and correlation of SPARQL similarity features. The analysis results are related to the choice of explainable models.

Studying User Search Behaviors at the SPARQL Session Level   **Nanjing, China**
Supervised by Prof. Meng Wang   Jan. 2020 to May 2020

- In the queries issued to SPARQL endpoints, a significant portion of the queries are robotic queries that are generated by automated scripts, which would affect the analysis of real user behaviors. Therefore, we designed an algorithm to identify robotic queries and proposed a pipeline method to distinguish between robotic queries and organic queries. The paper describing this method has been accepted in *APWeb-WAIM 2020*.
- To improve users' experience when using SPARQL, we studied user behaviors at the SPARQL session level, described as a continuous query reformulation process in which they try to express their needs more clearly. We had 4 key findings and utilized them in an application example to illustrate the potentiality of utilizing user behaviors in search sessions to design technologies that help users to search via SPARQL. The paper has been accepted in *ISWC 2020*.
- We are currently working on elaborating the paper accepted by ISWC 2020 by presenting a more comprehensive analysis and planning to submit it to the *TKDE Journal*. Specifically, we summarize our analysis methods into three catalogs providing different perspectives of user behaviors. The application example is upgraded correspondingly and its effectiveness is further illustrated by the evaluation experiments.

PROJECTS

Real-time Style Transfer Glasses   **Nanjing, China**
Supervised by Prof. Jun Wu (Chinese website) in this lab   Oct. 2018 to Aug. 2020

- It's a **Student Research Training Program (SRTP)** Project at **National Level**, in which I served as a **team leader**.
- Employed a device that can transfer the style of scenes in front of you in real-time and display results on glasses.
- Obtained a Chinese **Utility Model Patent** of *head-mounted style transfer device* (2019211895013).
- Our implementation of the interactive platform of real-time style transfer based on PC: [code].

RESEARCH INTERESTS

My research interests include but not limited to: Knowledge Representation and Reasoning, Semantic Search, Graph Data Analysis, and User Search Behaviors.

ENGLISH

IELTS Academic: 7.0 overall (7.5 in Listening, 7.0 in Reading, 6.0 in Writing, 6.5 in Speaking).