Qiurong Song

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Research Interest

Health information, human-computer interaction, information retrieval

Education

09/2018 - Present

Wuhan University (WHU), Wuhan, China

B.S. in Information Management & Systems, School of Information Management (iSchool)

GPA: 3.8/4.0

Research Experiences

04/2021 - 10/2021

Prof. Jiepu Jiang's group, University of Wisconsin-Madison

Project: The effect of misinformation density on health information search

Conducted lab experiment and quantitative study to understand how does search result misinformation density affects users' search behavior and learning outcome

- Built a search system close to the real scene with the Flask framework, which could return search results with different amount of misinformation according to the experimental settings
- Improved misinformation identification using sklearn for text classification
- Conducted lab experiments and interviews to collect the data of users' behavior
- Performed quantitative analysis and discussed data results
- write a full paper submitted to WWW 2022

Paper submitted to WWW 2022: **Song, Q.** and Jiang, J. 2021."How Misinformation Density Affects Health Information Search." [pdf]

03/2020 - Present

Prof. Long Lu's group, Wuhan University, China

Project: Intelligent Diagnosis of Autism Using Multi-source Data Fusion

Assist Autism diagnosis using multiple data sources, including eye movement, EEG, and facial expression data. This method is much more efficient than traditional scale methods and facilitates early intervention for children with autism.

- Read relevant research, designed fusion models and decision solutions
- Built predictive models using open source eye-movement datasets and neural networks using the PyTorch framework; Cleaned and pre-processed EEG data
- Applied neural network algorithm, support vector machine and decision tree algorithm with Python and Sklearn to construct diagnose fusion models

Project: Systematic Literature Review on the Application of Big data and AI Methods in the Diagnosis and Treatment of Neuropsychiatric Disorders

Did a literature review on the application of big data and artificial intelligence in the field of neuropsychiatry and summarized related data types and algorithms frequently used in recent years.

- Organizational division of labor and schedule management as team leader
- Wrote a literature review and published in the book "Big Data in Psychiatry" [pdf]

09/2020 - 09/2021

Prof. Yongqiang Sun's group, Wuhan University, China

Project: The Influence of Team Diversity on Virtual Team Performance

Conducted a team-level survey and used structural equation modeling to quantitatively analyze the data to study the effect of information diversity and value diversity on knowledge sharing and team performance

- Proposed a research model to explore the impact of two types of deep-level team diversity
 on team performance in virtual teams; analyzed the relationship between the two types,
 information diversity, and work value diversity
- Designed questionnaires and collected team-level data with questionnaires
- Used partial least squares (PLS) regression to test the theoretical hypotheses with SmartPLS and SPSS
- Discussed obtained results and wrote manuscripts

Paper to be submitted: <u>Song, Q.</u>, Zhang, H., and Sun, Y. 2021. "Will Team Diversity Enhance or Reduce Virtual Team Performance? A Two-Dimensional Deep-Level Diversity Perspective." [pdf]

Publication

Song, Q., Huang, T., Wang, X., Niu, J., Zhao, W., Xu, H., and Lu, L. 2021. "Chapter 15 - Application of Big Data and Artificial Intelligence Approaches in Diagnosis and Treatment of Neuropsychiatric Diseases," in Big Data in Psychiatry #X0026; Neurology, A.A. Moustafa (ed.). Academic Press, pp. 305-323. (book chapter) [pdf]

Honors and Awards

- China National Scholarship
 - Top 2% at WHU based on academic performance, the highest scholarship set by the government, 2019
- Outstanding Student Leaders of Wuhan University
 - Top 2% at WHU based on academic performance and leadership in student work, 2019
- First-class Scholarship of Wuhan University
 - Top 5% based on academic performance, 2019
- Second-class Scholarship of Wuhan University
 - Top 10% based on academic performance, 2020/2021

Volunteer Activities

- Docent of Wanlin Art Museum of Wuhan University, 2019.3-2020.12
- Volunteer providing academic tutoring for children of doctors on the front lines of the fight against the epidemic, 2020.2-2020.4

Skills

Research Methods: Interviews, survey, web-based system development, experimental design, quantitative analysis **Programming**: Python, JAVA, R, Flask, JavaScript, HTML/CSS, MATLAB, MySQL

TOEFL: 105 (Reading: 29; Listening: 30; Speaking: 22; Writing: 24)