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

Awards: China National Scholarship (2019, top 2%)

First-class Scholarship of Wuhan University (2019, top 5%)

Second-class Scholarship of Wuhan University (2020/2021, top 10%)

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**

Our research indicates that search result misinformation density strongly affects users' search behavior and learning outcome. High misinformation density led to increased search activities but did not lead to better search outcomes and learning outcomes.

- 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 experiment 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**

We did a literature review on application of big data and artificial intelligence in the field of neuropsychiatry and summarized related data types and algorithms frequently used in recent years. We took autism, schizophrenia, Alzheimer's disease, epilepsy and other neuropsychiatric disorders as examples for specific analysis.

- 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**

We conducted a team-level survey and the findings indicate that information diversity contributes to team performance through improving team efficacy and mutual trust while value diversity inhibits team performance as it reduces team efficacy and mutual trust.

- 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: **Song, Q.**, 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]

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)