

JIANG WU

Ph.D. candidate at State Key Lab of CAD&CG, Zhejiang University

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EDUCATION

Ph.D. in Computer Science

State Key Lab of CAD&CG, Zhejiang University

Sep. 2019 - June 2024 (expected) Hangzhou, Zhejiang

B.Eng. in Computer Science

CS College, Zhejiang University

Sep. 2015 - June 2019 Hangzhou, Zhejiang

PUBLICATIONS

First-Author Publications

- J. Wu, D. Liu, Z. Guo, and Y. Wu, "Rasipam: Interactive pattern mining of multivariate event sequences in racket sports," *IEEE Transactions on Visualization and Computer Graphics (conditionally accepted, Proceedings of IEEE VIS)*, 2022.
- J. Wu, D. Liu, Z. Guo, Q. Xu, and Y. Wu, "TacticFlow: Visual analytics of ever-changing tactics in racket sports," *IEEE Transactions on Visualization and Computer Graphics (Proceedings of IEEE VIS)*, 2021.
- J. Wu, Z. Guo, Z. Wang, Q. Xu, and Y. Wu, "Visual analytics of multivariate event sequence data in racquet sports," in *Proceedings of IEEE VIS*, 2020.

Second-Author Publications

- D. Deng, J. Wu, J. Wang, et al., "EventAnchor: Reducing human interactions in event annotation of racket sports videos," in *Proceedings of ACM SIGCHI*, 2021.
- J. Wang, J. Wu, A. Cao, Z. Zhou, H. Zhang, and Y. Wu, "Tac-Miner: Visual tactic mining for multiple table tennis matches," *IEEE Transactions on Visualization and Computer Graphics (Proceedings of IEEE PacificVis)*, 2021.
- X. Shu, J. Wu, X. Wu, et al., "DancingWords: Exploring animated word clouds to tell stories," *Journal of Visualization (Proceedings of ChinaVis)*, 2021.

Other Publications

- D. Deng, Y. Wu, X. Shu, J. Wu, S. Fu, W. Cui, and Y. Wu, "VisIm-ages: A fine-grained expert-annotated visualization dataset," *IEEE Transactions on Visualization and Computer Graphics (preprints)*, 2022.

RESEARCH INTERESTS

I am currently a third-year Ph.D. candidate under Prof. Yingcai Wu's supervision. My research focuses on data mining and visual analytics of multivariate event sequence data, with recent focus on visual analytics of racket sports. My research is dedicated to combining the computing power of computers with the subject expertise of domain experts, in order to provide meaningful and intelligible data insights.

SKILLS

Web Development

React, Vue, Typescript



Native Development

Python, Android, C/C++



Algorithm & AI Model

Pattern mining, NLP, CV



XR Development

Unity, MRTK, VRTK



Infrastructures

Kubernetes, Docker, Linux



AWARDS

2021

- Special Scholarship**
the 28th Research Institute of China Electronic Technology Group Corporation
- Honorable Mention Award**
ChinaVis 2021
- Honorable Mention Award**
IEEE PacificVis 2021
- Merit Graduate Award**
Zhejiang University
- Outstanding Graduate Award**
Zhejiang University

2020

- Merit Graduate Award**
Zhejiang University
- Outstanding Graduate Award**
Zhejiang University

PROJECTS

2018 – ongoing

- **Big Data Platform for Chinese National Table Tennis Team**

Chinese National Table Tennis Team (CTTT) seeks to improve players' performance with big data. I have designed and developed the Big Data Platform of CTTT to provide the team with efficient and effective data service for many major Table Tennis events, such as Table Tennis in Tokyo 2021. I now serve as the chief architect of the platform. The platform is built upon my three important research works as follows.

- **Data Acquisition**

The platform needs to process massive amounts of broadcast video data to extract meaningful, detailed information. Thus, I developed a novel interactive user interface for efficiently acquiring data. The work has been accepted by ACM SIGCHI 2021.

- **Data Mining**

Based on the massive data, domain experts expect to gain data insights into players' playing styles or tactics. Thus, I proposed several multivariate pattern mining algorithms to discover patterns. Two of them are publicly available on OSF and accepted by IEEE VIS 2020 and 2021.

- **Visual Analytics**

Domain experts, such as coaches, would usually find it difficult to understand complex pattern mining results without intuitive visual designs. Thus, I proposed tailored visual analytics systems with intuitive user interactions, such as natural language commands. These systems have been highly recognized by domain experts for their usefulness and effectiveness. These applications resulted in three first-author papers accepted by IEEE VIS, and a second-author papers published in IEEE TVCG.

ACTIVITIES

2022

- **Reviewer** for IEEE VIS 2022

PATENTS

2022

- **A Method for Tactic Mining and Visual Analytics in Table Tennis**

Patent No: ZL 2019 1 0940224.3

- **A Visual Analytics System for Multivariate Racket Sports Data**

Patent No: ZL 2020 1 0738157.X

2020

- **A Data Acquisition System for Table Tennis**

Patent No: ZL 2019 1 0939527.3