Zihang Fu

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EDUCATION

Zhejiang University of Technology **Zhejiang, China**
Bachelor of Computer Science and Technology *Sept 2022 – Jun 2026*

- **GPA:** 3.3/4.0
- **Coursework:** C++, JAVA, Data Structures, Calculus, Linear Algebra, Discrete Mathematics, Probability and Statistics, Human-Computer Interaction and Interface Designs

RESEARCH PROJECT

[1] **Fu, Z.**, Wang, Y., Sun, G., Huang, C.,& Liang, R. (2025). **InfoAffect: A Dataset for Affective Analysis of Infographics.** *Pacific Visualization Conference* ***(CORE Rank: B, under review)***.

- Developed a dual-channel affective dataset that integrates visual infographic designs and textual descriptions to support research on multimodal affect recognition.
- Proposed an affect extraction method and conducted user study with two experiments to validate usability and accuracy of InfoAffect dataset

[2] Wang, Y., Sun, G., **Fu, Z.**, & Liang, R. (2025). **Human-Computer Interaction and Visualization in Natural Language Generation Models: Applications, Challenges, and Opportunities.** *Frontiers of Computer Science* ***(JCR Q1, IF=4.6)***.

- Developed a taxonomy of interaction methods and visualization techniques, providing a structured overview of key research subjects and tasks.
- Identified current shortcomings and highlighted challenges and opportunities for applying LLMs in critical decision-making scenarios.

[3] Wang, Y., Sun, G., **Fu, Z.**, & Liang, R. (2025). **What is the Role of Dataset Size and Fine-Tuning Method in Optimizing Small Language Models for Story Generation?** *International Conference on Intelligent Computing (Hosted by The Society of International Computing).*

- Investigated the performance of small language models for story generation under resource constraints. Conducted fine-tuning experiments using JSON-structured story data, comparing two fine-tuned methods, Supervised Fine-Tuning and Direct Preference Optimization.
- Analyzed model performance across data sizes and fine-tuning methods, providing insights for optimizing small models and guiding model selection in practical applications.

[4] Wang, Y., Du K., **Fu, Z.**, Zheng, X., Sun, G., & Liang, R. (2025). **From Text to Chart: An Integrated Approach for Chart Recommendation Using Hybrid Retrieval.** *ACM Conference on Human Factors in Computing Systems* ***(CORE Rank: A*, under review)***.

- Developed an interactive chart recommendation system that uses hybrid retrieval methods (sparse and dense) to suggest suitable chart types based on natural language descriptions.
- Constructed a comprehensive multimodal dataset to enhance the accuracy and diversity of chart recommendations, validated through experiments and user studies.

[5] Wang, Y., Sun, G., **Fu, Z.**, Liu, Z., Du, K., Gao, H., & Liang, R. (2024). **TaleFrame: An Interactive Story Generation System with Fine-Grained Control and Large Language Model.** *IEEE Transactions on Human-Machine System* ***(JCR Q2, IF=4.9, under review)***.

- Developed a structured story generation system that integrates large language models with human–

computer interaction to enable fine-grained control over narrative creation.

- Constructed a preference dataset with nearly 10,000 structured entries and fine-tuned a Llama-3 model to enhance coherence, creativity, and user controllability in AI-generated storytelling.

[6] Liu, Z., Wang, Y., **Fu, Z.**, Sun, G., & Liang, R. (2025). **Semantics, Structures, Events: Towards Anomaly-Aware Time-Series Query Recommendation.** *International Conference on Acoustics, Speech, and Signal Processing* ***(CORE Rank: B, under review)***.

- Developed an end-to-end framework for anomaly-aware query recommendation in multivariate time-series data, tailored to e-commerce live streaming scenarios.
- Designed a semantic–structural–event encoding architecture and a counterfactual intervention modeling approach that significantly improve anomaly detection accuracy and query recommendation relevance.

INTERN EXPERIENCE

Gansu Aier Eye Hospital Co., Ltd **Gansu, China**

Information department *Jul 2023 – Aug 2023*

- Maintained and debugged hospital management software modules, ensuring system reliability and performance.
- Enhanced system performance through database query tuning, and memory management, improving response times and user experience.
- Redesigned user interface components to improve usability and streamline workflows, reducing data entry time for medical staff.

EXTRACURRICULAR ACTIVITIES

The 19th Asian Games Hangzhou **Zhejiang, China**

Volunteer Team Leader – Sports Presentation & Award Ceremony *Aug 2023 – Oct 2023*

- Led a team of volunteers to manage award ceremonies and sports presentations, ensuring smooth execution of high-profile events including the Women's Water Polo Final. Liaised with school administrators and clubs to align resources, resolving conflicts during inter-departmental collaborations.
- Oversaw national flag preparation and medal distribution, maintaining ceremonial standards and accuracy under tight deadlines.
- Coordinated team efforts, fostering efficient collaboration and high morale, contributing to the professional and successful running of international sporting events.
- Honors: Advanced Individual, Huanglong Sports Center, Hangzhou Asian Games & Asian Para Games

OTHERS

Technical Skills: Python, Java, C++, Docker, Git, Kubernetes, Linux/Unix server administration, Shell scripting (Bash), AWS/GCP, Nginx/Apache, MySQL, PostgreSQL, MongoDB, Redis, Spring boot

Languages: Mandarin (Native), English (Fluent)

Interests: Competitive programming, Football