Yahui Fu

Researcher at Speech and Audio Processing Lab, Kyoto University, Kyoto, Japan
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RESEARCH INTERESTS

- Spoken Dialogue System (empathetic/personalized response generation; knowledge reasoning; human-robot interaction)
- Multimodal Emotion Recognition

EDUCATION

Kyoto University   Kyoto, Japan
Ph.D. in Intelligence Science and Technology, Graduate School of Informatics   Oct. 2021 –Sept. 2024
  – Supervisor: *Prof. Tatsuya Kawahara*

Japan Advanced Institute of Science and Technology   Nomi, Japan
M.E. in Information Science, School of Advanced Science and Technology   Apr. 2020 –June 2021
  – Supervisor: *Prof. Shogo Okada*

Tianjin University   Tianjin, China
M.E. in Computer Technology, Department of Intelligence and Computing   Sept. 2018 –June 2021
  – Supervisor: *Prof. Longbiao Wang*

EXPERIENCE

Kyoto University   Kyoto, Japan
Researcher   Oct. 2024 - current
  – Spoken dialogue system

rinna Co., Ltd.   Tokyo, Japan
Research Intern   July 2023 - Sept. 2023
  – Personality recognition in monologue and dialogue using the realpersonachat corpus.

Japan Advanced Institute of Science and Technology   Nomi, Japan
Researcher   July 2021 - Sept. 2021
  – Multimodal (speech, linguistics) and knowledge graph modeling for emotion recognition.

SKILLS

- **Language:** Chinese (native); English (fluent); Japanese (beginner)
- **Programming:** Python, Matlab, C/C++, Java, LaTeX

PUBLICATIONS

JOURNAL ARTICLES

[1] **Yahui Fu**, Koji Inoue, Divesh Lala, Kenta Yamamoto, Chenhui Chu, and Tatsuya Kawahara, "Dual variational generative model and auxiliary retrieval for empathetic response generation by conversational robot", *Advanced Robotics*, pp. 1–13, 2023.

[2] Lili Guo, Longbiao Wang, Jianwu Dang, **Yahui Fu**, Jiaxing Liu, and Shifei Ding, "Emotion recognition with multimodal transformer fusion framework based on acoustic and lexical information", *IEEE Multi-Media*, vol. 29, no. 2, pp. 94–103, 2022.

[3] **Yahui Fu**, Shogo Okada, Longbiao Wang, Lili Guo, Yaodong Song, Jiaxing Liu, and Jianwu Dang, "Context-and knowledge-aware graph convolutional network for multimodal emotion recognition", *IEEE MultiMedia*, vol. 29, no. 3, pp. 91–100, 2022.

CONFERENCE PROCEEDINGS

[1] **Yahui Fu**, Chenhui Chu, and Tatsuya Kawahara, "Styemp: Stylizing empathetic response generation via multi-grained prefix encoder and personality reinforcement", in *Proceedings of the 25th Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGdial)*, 2024, pp. 172–185.

[2] **Yahui Fu**, Koji Inoue, Chenhui Chu, and Tatsuya Kawahara, "Reasoning before responding: Integrating commonsense-based causality explanation for empathetic response generation", in *Proceedings of the 24th Meeting of the Special Interest Group on Discourse and Dialogue (SIGdial)*, 2023, pp. 645–656.

[3] Jiaxing Liu, Sen Chen, Longbiao Wang, Zhilei Liu, **Yahui Fu**, Lili Guo, and Jianwu Dang, "Multimodal emotion recognition with capsule graph convolutional based representation fusion", in *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2021, pp. 6339–6343.

[4] **Yahui Fu**, Lili Guo, Longbiao Wang, Zhilei Liu, Jiaxing Liu, and Jianwu Dang, "A sentiment similarity-oriented attention model with multi-task learning for text-based emotion recognition", in *MultiMedia Modeling (MMM): 27th International Conference, Prague, Czech Republic, June 22–24, Proceedings, Part I 27*, Springer, 2021, pp. 278–289.

[5] **Yahui Fu**, Shogo Okada, Longbiao Wang, Lili Guo, Yaodong Song, Jiaxing Liu, and Jianwu Dang, "Consk-gcn: Conversational semantic-and knowledge-oriented graph convolutional network for multimodal emotion recognition", in *IEEE International Conference on Multimedia and Expo (ICME)*, 2021, pp. 1–6.

WORKSHOP PROCEEDINGS

[1] Zi Haur Pang, **Yahui Fu**, Divesh Lala, Keiko Ochi, Koji Inoue, and Tatsuya Kawahara, "Acknowledgment of emotional states: Generating validating responses for empathetic dialogue.", in *Proc. Int'l Workshop Spoken Dialogue Systems (IWSDS)*, Sapporo, Japan, 2024.

[2] **Yahui Fu**, Haiyue Song, Tianyu Zhao, and Tatsuya Kawahara, "Enhancing personality recognition in dialogue by data augmentation and heterogeneous conversational graph networks.", in *Proc. Int'l Workshop Spoken Dialogue Systems (IWSDS)*, Sapporo, Japan, 2024.

[3] **Yahui Fu**, "Causality reasoning for empathy-enriched and personality-conditioned spoken dialogue system", in *Proceedings of the 19th Annual Meeting of the Young Researchers' Roundtable on Spoken Dialogue Systems (YRRSDS)*, Prague, Czechia: Association for Computational Linguistics, Sep. 2023, pp. 62–63.

[4] **Yahui Fu**, Koji Inoue, Divesh Lala, Kenta Yamamoto, Chenhui Chu, and Tatsuya Kawahara, "Improving empathetic response generation with retrieval based on emotion recognition", in *Proc. Int'l Workshop Spoken Dialogue Systems (IWSDS)*, Los Angeles, USA, 2023.

PATENTS

- Longbiao Wang, Yahui Fu, Jianwu Dang, and Lili Guo, "A Method for Textual Emotion Recognition based on Sentiment Similarity-oriented Attention", Chinese patent: CN111966824A, November 20, 2020.

SCHOLARSHIPS AND AWARDS

- The establishment of university fellowships towards the creation of science and technology innovation, awarded by Japan Science and Technology Agency (JST).   Oct. 2021–Sept. 2024

- Tianjin University-JAIST Collaborative Educational Program Scholarship, awarded by Japan Advanced Institute of Science and Technology (JAIST).   Apr. 2020–Mar. 2021