Shintaro Sakai

shinsaka@iu.edu | shinshinsakasaka.github.io | linkedin.com/in/shintaro-sakai-400a54247

Research Interests

AI Fairness, Computational Social Science, Natural Language Processing, Human-Computer Interaction, Social Psychology, Culture

Education

Indiana University Bloomington (Bloomington, US) August 2024 – Present

- PhD - Informatics
- Main advisors: Haewoon Kwak, Jisun An
- GPA: 4.0/4.0

Nagoya University (Naogya, Japan) April 2021 – March 2024

- MS - Informatics
- GPA: 4.05/4.3

Nagoya University (Naogya, Japan) April 2017 – March 2021

- BS - Informatics
- GPA: 3.91/4.3

Current Research Projects

1. Exploring Retrieval-Augmented Generation for Culturally Adaptive Large Language Models Oct 2025 –

- Advisor: Jisun An and Haewoon Kwak (Indiana University Bloomington)
- This project investigates how Retrieval-Augmented Generation (RAG) can improve cultural alignment. We will systematically evaluate how different retrieval sources such as Wikipedia, local-language news, and social media affect alignment level across different types of culturally sensitive tasks, including factual, interpretive, and normative cultural reasoning.

2. Enhancing Human–LLMs Collaborations with Culturally-Normative Communications Sep 2025 –

- Advisor: Katharina Reinecke (University of Washington)
- The project examines the effects of cultural communication norms (low- vs. high-context communication) on people's perceptions of LLMs and behaviors in human–LLMs collaboration.

3. Modeling Engaging Human–Robot Interactions via Multimodal Analysis of Social Games Jan 2024 –

- Advisor: Goren Gordon (Indiana University Bloomington)
- This project collects and analyzes multimodal data, including textual, audio, and visual cues, from participants engaging in the social game Werewolf. By examining the dynamics of human interactions during gameplay, we aim to identify key social behaviors and interaction patterns that can be leveraged to enhance the enjoyment, engagement, and naturalness of human–robot interactions.

Publications and Conferences

1. Shintaro Sakai, Haewoon Kwak, Jisun An, Akira Matsui. Quantifying Gender Stereotypes in Japan between 1900 and 1999 with Word Embeddings. arxiv. 2025. (Under peer-review at EPJ Data Science) Link
2. Long-Jing Hsu, Shintaro Sakai, Weslie Khoo, Hiroki Sato, Manasi Swaminathan, Katherine M. Tsui, David J. Crandall, Selma Šabanovic. Translation Gummy, or Lost in Translation? Cross-Cultural Conversations with a LLM-Powered Robot in Japan and the U.S.. 2025. (Under peer-review at ACM Transactions on Human-Robot Interaction)
3. Shintaro Sakai, Jisun An, Migyeong Kang, Haewoon Kwak. Somatic in the East, Psychological in the West?: Investigating Clinically-Grounded Cross-Cultural Depression Symptom Expression in LLMs. arxiv. 2025.

(Submitting to The Web Conference) Link

4. Kaisla Kajava, Ana Paula Gonzalez Torres, Antti Rannisto, Shintaro Sakai. Justifying AI regulation: Examining multi-stakeholder responses to the AI Act. Telematics and Informatics. 2025. Link

Non-archival Conferences

1. Shintaro Sakai. Evaluating the impact of lexical gender bias on gender bias measurement with word embeddings. The New Directions in Analyzing Text as Data (TADA 2023). 2023. (Poster)
2. Shintaro Sakai, Yasuhiro Suzuki. Evaluating the Quality of Word Embedding Trained on Wikipedia Articles. The 9th International Conference on Computational Social Science (IC2S2 2023). 2023. (Poster)
3. Shintaro Sakai. Evaluating Semantic Changes in the Concept of Happiness with Diachronic Word Embeddings. The 9th International Conference on Computational Social Science (IC2S2 2023). 2023. (Poster)

Research and Work Experience

Research Intern, Aalto University (Espoo, Finland) May 2022 – July 2022

- Aalto Science Institute AScI internship programme
- Advisor: Nitin Sawhney, Group: CRAI-CIS research group
- I analyzed feedback from various stakeholders on the AI Act proposal with Natural Language Processing.

Awards and Honors

Fall 2024 Luddy Doctoral Associate Instructor (AI) Fellowship, Indiana University Bloomington (Bloomington, US) August 2024

The Cornell, Maryland, Max Planck Pre-doctoral Research School 2022, Max Planck Institute for Software Systems (Saarbrucken, Germany) August 2022

- I was chosen as one of the participants. I attended lectures on cutting-edge computer science research and interacted with inspiring faculties and peers.

Languages

- English: IELTS Overall Band Score 7.5 (Listening 7.5, Reading 8.5, Writing 7.0, Speaking 6.5)
- German: Beginner Level (I took German coursers when I was an undergraduate student)
- Japanese: Native Level