

Yuki Gonda

Nationality: Japan

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Work Experience:

Internship Experience

- **Junior Researcher at German Research Center for Artificial Intelligence (DFKI):** Kaiserslautern, Germany (January 2025 – July 2025, Planned):

Project Name: Self-Organizing Personal Knowledge Assistants in Evolving Corporate Memories (SensAI)

Advisor: Associate Researcher Dr. Heiko Maus, German Research Center for Artificial Intelligence (DFKI)

Description: Knowledge graph embedding using Graph Neural Network

- **Junior Researcher at SmartFactory KL e.V.:** Kaiserslautern, Germany (October 2024 – December 2024):

Project Name: A Dynamic Multi-Objective Scheduling Approach for Multi-Agent Reinforcement Learning

Advisor: Researcher M.Sc. Katharina Hengel, German Research Center for Artificial Intelligence (DFKI)

Description: Developed a Federated Learning and Digital Twin environment

- Implemented a learning environment for Multi-Agent Reinforcement Learning using a Federated Learning architecture.
- Created an environment for real-time Digital Twin simulation using AR goggles.

- **Data Scientist at Yakuodo Holdings Co., Ltd.:** Sendai, Japan (August 2023 – May 2024)

Description: Built a data analysis environment for a nationwide drugstore chain

- Developed an analysis environment for a Japanese drugstore chain with over 300 stores, integrating sales and geographic data.
- Utilized the constructed analysis environment to perform detailed statistical analysis, supporting data-driven decision-making.

Research Assistant Experience

- **Created a custom large language (LLM) model to support and advance research activities:** Tsukuba, Japan (April 2024 – August 2024)

Research Experience:

- **University of Tsukuba, College of Engineering Systems:** Tsukuba, Japan (2023 – 2024):

Project Name: Effectiveness Evaluation of Message Function for Surrogate Simulation Using Local Neural Networks

Advisor: Assistant Professor Naoto Mitsume, Institute of Systems and Information Engineering, University of Tsukuba

Description: Developed a Graph Neural Network for surrogate modeling in numerical analysis.

- Constructed a solver for temperature field analysis using Smoothed Particle Hydrodynamics (SPH) method and generated training data.
- Developed a Graph Neural Network (GNN) capable of adapting to arbitrary shapes for temperature field analysis.

Poster Presentation:

1. **Y. Gonda**. “Structured Grid-Based Graph Neural Network for Temperature Field Analysis.” *The Japan Society for Computational Engineering and Science Summer Student Conference*. September 24, 2023.

Presentation:

1. **Y. Gonda, N. Mitsume**. “Development of a Graph Neural Network Incorporating Implicit Function Representations of Boundaries.” *The Japan Society for Computational Engineering and Science Conference*. June 10, 2024.

Education:

- University of Tsukuba, College of Engineering Systems: Tsukuba, Japan (2020 – 2024)
- University of Tsukuba, Graduate School of Science and Technology, Degree Programs in Systems and Information Engineering: (2024 – Present)

Grants & Scholarships:

Scholarships

- Selected for the fully funded *Tobitate! (Leap for Tomorrow) Study Abroad Initiative, STEAM Course*, covering all expenses, totaling 2,500,000 JPY (2024)

Yuki Gonda

Kaiserslautern, 15. November 2024