

Takuma Sato / 佐藤 拓真

Master's Student, 2nd year,
Intelligent Robot Dialogue Lab (Sub: Natural Language Processing Lab),
Division of Information Science,
Graduate School of Science and Technology,
Nara Institute of Science and Technology

E-mail: sato.takuma.sq6@naist.ac.jp

GitHub ID: [takuma1229](https://github.com/takuma1229)

EDUCATION

April 2019 – March 2024

Keio University

Bachelor of Philosophy, Ethics Major, Philosophy Program, Faculty of Letters

April 2024 – March 2026 (Expected graduation)

Nara Institute of Science and Technology

Intelligent Robot Dialogue Lab (Supervised by Prof. Koichiro Yoshino), Division of Information Science, Graduate School of Science and Technology

EMPLOYMENTS

Science Tokyo

Apr 2025 - now

- **Research Assistant**
 - Research on Pragmatics in Natural Language Processing (Supervised by Dr. Koichiro Yoshino)

National Institute of Informatics

Oct 2024 - now

- **Research Assistant**
 - Research on the Evaluation and improvement of benchmarks in NLP, primarily based on psychometric theory and Philosophy of Science (Supervised by Dr. Saku Sugawara)

Preferred Networks Inc.

Oct 2024 - Dec 2024

- **Part-time Employee as a Researcher**
 - Research on dialogue systems based on large language models (Supervised by Dr. Keita Higuchi)

RIKEN Guardian Robot Project

Oct 2024

- **Part-time Employee as a Researcher**

Preferred Networks Inc.

July 2024 - Sep 2024

- **Summer Internship as a Researcher**
 - Research on dialogue systems based on large language models (Supervised by Dr. Keita Higuchi)

LabBase Inc.

Oct 2023 - July 2024

- **Long-term Internship as Web Engineer / Research Engineer**
 - Web backend development using Rust/axum
 - Research and development of recommendation systems handling natural language data

Ann Inc.

Sep 2021 - March 2023

Long-term Internship as:

- **Web Engineer**
 - Frontend web development with TypeScript/Next.js and React Native
- **Natural Language Processing R&D**
 - Research and development of natural language processing technologies in the financial economics domain
- **Software Engineer**
 - Development of natural language processing and speech recognition services using AWS and GCP

PUBLICATIONS

International Conferences Paper (Peer-reviewed)

1. Takuma Sato, Ai Kubota, Koji Mineshima "Is Partial Linguistic Information Sufficient for Discourse Connective Disambiguation? A Case Study of Concession, Vienna, ACL-SRW 2025 (to appear)
2. Hirohane Takagi, Shoji Moriya, Takuma Sato, Manabu Nagao, Keita Higuchi "A Framework for Efficient Development and Debugging of Role-playing Agents with Large Language Models", Cagliari/Italy, IUI 2025
3. Ai Kubota, Takuma Sato, Takayuki Amamoto, Ryota Akiyoshi, Koji Mineshima, "Annotation of Japanese Discourse Relations Focusing on Concessive Inferences", 20-25 May, Torino/Italy LREC-COLING 2024

Domestic Conferences (Without Peer Review)

1. Takuma Sato, Saku Sugawara "Evaluating 'Evaluation': On Construct Validity in Language Model Assessment", The 39th Annual Conference of the Japanese Society for Artificial Intelligence Organized Session 'Technical and Social Perspectives on Datasets and Benchmarks' (in Japanese), Osaka, May 2025 [Oral]
2. Takuma Sato, Seiya Kawano, Koichiro Yoshino "Improvement of In-context Learning using Pragmatic Theories" (in Japanese), 263rd Natural Language Processing Research Meeting, Information Processing Society of Japan, March 2025 [Oral]
3. Takuma Sato, Seiya Kawano, Koichiro Yoshino. "Towards Dataset Construction for Practical Pragmatic Inference Evaluation." (in Japanese), The 15th Dialogue System Symposium (102nd SLUD Research Meeting), Special Interest Group on Spoken Language Understanding and Dialogue Processing (SIG-SLUD), Japanese Society for Artificial Intelligence. November 2024.
4. Takuma Sato, Ai Kubota, Koji Mineshima (2024). "How Does BERT Determine Adversative Discourse Relations? Using Attention and Part-of-Speech as Clues." (in Japanese), In Proceedings of NLP2024, Kobe, Japan.
5. Takuma Sato, Ai Kubota, Koji Mineshima (2023). "Can Entailment Relations and Sentiment Polarity Capture Adversative Discourse Relations?" (in Japanese), In Proceedings of NLP2023, Okinawa, Japan.
6. Ai Kubota, Takuma Sato, Takayuki Amamoto, Ryota Akiyoshi, Koji Mineshima. "Japanese Discourse Relation Annotation Focusing on Adversative Inference Relations." (in Japanese), The 29th Annual Conference of the Association for Natural Language Processing (NLP2023), March 13-17, 2023, Okinawa.

Grants

- Toyota Foundation Research Grant, Fiscal Year 2024 Specific Research Theme "Co-Creating New Society with Advanced Technologies" (Individual Research)
 - Takuma Sato, "Improvement and Application of Language Models' Pragmatic Inference Ability", May 2025 - April 2027, Grant Amount: 1,500,000 yen, Acceptance Rate: 27.27% ([link](#))

TECHNICAL SKILLS

Python	Research (NLP and ML)
Rust (axum)	Web Backend Development in Long-term Internship
TypeScript / React / Next.js	Web Frontend Development in Long-term Internship
C++	Competitive Programming
Ruby on Rails	Web Backend Development in Personal Development

CERTIFICATIONS/OTHER SKILLS

- TOEIC Listening & Reading Test (IP Test): 920 (Dec 2024)
- Applied Information Technology Engineer Examination: Passed (Oct 2022)
- AT Only Ordinary Motor Vehicle Driver's License (Sep 2024)