

AYANA NIWA

Ph.D. in Engineering / NLP Researcher

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RESEARCH AND WORK EXPERIENCE

Research Scientist

Megagon Labs, Recruit Co., Ltd. Apr. 2024 – present Tokyo, Japan

- Job Description: dialogue systems, task ambiguity

Researcher

Tokyo Institute of Technology June 2024 – present Tokyo, Japan

- Research Theme: Prompt optimization, non-autoregressive generation

JSPS Research Fellow (DC2)

Japan Society for the Promotion of Science Apr. 2021 – Mar. 2023 Tokyo, Japan

- Research Theme: Structuring templates and acquiring lexical knowledge for text generation

Internship and Outsourced Business

Megagon Labs, Recruit Co., Ltd June 2019 – Mar. 2023 Tokyo, Japan

- Research Theme: Sentiment analysis

Collaborative Research

CyberAgent, Inc. Sep. 2018 – Mar. 2023 Tokyo, Japan

- Slogan generation using rhetorical devices

EDUCATION

Tokyo Institute of Technology

Ph.D. Student in Computer Science Apr. 2020 – Mar. 2023 Tokyo, Japan

Tokyo Institute of Technology

M.S. in Computer Science Apr. 2018 – Mar. 2020 Tokyo, Japan

Sophia University

B.S. in Science Information Apr. 2014 – Mar. 2018 Tokyo, Japan

PUBLICATIONS AND PRESENTATIONS

Journal

- Ayana N., Sho, T., & Naoaki, O. (2023). Nearest Neighbor Non-autoregressive Text Generation. *Journal of Information Processing*, 31, 344–352. doi:10.2197/ipsjip.31.344

- **Ayana N.**, Naoaki, O., Kohei, W., Keisuke, N., & Masataka, M. (2021). Construction of a Corpus of Rhetorical Devices in Slogans and Structural Analysis of Antitheses. *ACM Trans. Asian Low-Resour. Lang. Inf. Process.*, 20(6). doi:10.1145/3465218

International Conferences

- **Ayana N.**, & Hayate, I. (2024b). AmbigNLG: Addressing Task Ambiguity in Instruction for NLG. *Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing (Long Papers)*, Miami, Florida: Association for Computational Linguistics, (to appear).
- Kaneko, M., Takase, S., **Ayana N.**, & Okazaki, N. (2022). Interpretability for Language Learners Using Example-Based Grammatical Error Correction. *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, 7176–7187. doi:10.18653/v1/2022.acl-long.496
- **Ayana N.**, Keisuke, N., & Naoaki, O. (2021b). Predicting Antonyms in Context using BERT. *Proceedings of the 14th International Conference on Natural Language Generation*, 48–54. doi:10.18653/v1/2021.inlg-1.6

Article

- **Ayana N.**, Sho, Y., Junya, T., & Itsumi, S. (2024). NLP Colloquium. (to appear).

Domestic Conferences and Symposiums

- **Ayana N.**, & Hayate, I. (2024a). Addressing Ambiguity in Instruction for NLG. In *the 30th Annual Meeting of the Association of Natural Language Processing (NLP2024)*, Hyogo, Japan.
- **Ayana N.**, & Naoaki, O. (2023). Investigating the Effectiveness of Neighbor Distributions in the Pretrained Model T5. In *the 29th Annual Meeting of the Association of Natural Language Processing (NLP2023)*, Okinawa, Japan. Retrieved from https://www.anlp.jp/proceedings/annual_meeting/2023/pdf_dir/P12-6.pdf
- Daisuke, T., Kohei, W., **Ayana N.**, & Naoaki, O. (2023). Testing for Dependence on the Direction of Sentence Generation in Large Language Models. In *the 29th Annual Meeting of the Association of Natural Language Processing (NLP2023)*, Okinawa, Japan. Retrieved from https://www.anlp.jp/proceedings/annual_meeting/2023/pdf_dir/H9-1.pdf
- **Ayana N.**, Sho, T., & Naoaki, O. (2022). Non-autoregressive Generation using the Nearest Neighbor. In *the 28th Annual Meeting of the Association of Natural Language Processing (NLP2022)*, Online. Retrieved from https://www.anlp.jp/proceedings/annual_meeting/2022/pdf_dir/C6-3.pdf
- Ryogo, I., **Ayana N.**, Mizuki, S., & Naoaki, O. (2022). Robust Dependency Parsing for the Omission of a Post-positional Particle using Pseudo Training Data. In *the 28th Annual Meeting of the Association of Natural Language Processing (NLP2022)*, Online. Retrieved from https://www.anlp.jp/proceedings/annual_meeting/2022/pdf_dir/B7-1.pdf
- **Ayana N.**, & Hiroshi, M. (2021). A Study for Sentiment Analysis Accepting the Diverse of Emotion Sensitivities. In *Proceedings of the 35th Annual Conference of the Japanese Society for Artificial Intelligence (JSAI2021)*. doi:10.11517/pjsai.JSAI2021.O_2Yin506
- **Ayana N.**, Keisuke, N., & Naoaki, O. (2021a). Antonym Prediction in Context with BERT. In *the 27th Annual Meeting of the Association of Natural Language Processing (NLP2021)*, Online. Retrieved from https://www.anlp.jp/proceedings/annual_meeting/2021/pdf_dir/C9-1.pdf
- Natsumi, N., Tatsuya, H., **Ayana N.**, Keisuke, N., & Naoaki, O. (2021). Advertisement Slogan Generation Considering Company Information. In *the 27th Annual Meeting of the Association of Natural Language Processing (NLP2021)*, Online. Retrieved from https://www.anlp.jp/proceedings/annual_meeting/2021/pdf_dir/B3-3.pdf
- **Ayana N.**, Keisuke, N., & Naoaki, O. (2020). Slogan Generation with Antitheses Structure with Masked Language Models. In *the 15th Young Researcher Association for NLP Studies Symposium 2020 (YANS2020)*, Online.
- **Ayana N.**, Kohei, W., Keisuke, N., Masataka, M., & Naoaki, O. (2020a). Analysis of Antitheses Structure in Advertisement Slogan. In *the 26th Annual Meeting of the Association of Natural Language Processing (NLP2020)*, Ibaraki, Japan. Retrieved from https://www.anlp.jp/proceedings/annual_meeting/2020/pdf_dir/D3-4.pdf
- **Ayana N.**, Kohei, W., Keisuke, N., Masataka, M., & Naoaki, O. (2020b). Antithesis structure analysis in slogan using span candidate refinement with word correspondence. In *Proceedings of the 34th Annual Conference of the Japanese Society for Artificial Intelligence (JSAI2020)*. doi:10.11517/pjsai.JSAI2020.O_1E5GS901
- Natsumi, N., Tatsuya, H., **Ayana N.**, Naoaki, O., Kohei, W., Kazuya, K., & Keisuke, N. (2020). Advertisement Slogan Generation Considering company information. In *the 15th Young Researcher Association for NLP Studies Symposium 2020 (YANS2020)*, Online.
- **Ayana N.**, Naoaki, O., Keisuke, N., Chihiro, K., & Masataka, M. (2019a). A Study toward Automatic Advertisement Slogan Generation Considering Rhetorical Devices. In *the 14th Young Researcher Association for NLP Studies Symposium 2019 (YANS2019)*, Sapporo, Japan.
- **Ayana N.**, Naoaki, O., Keisuke, N., Chihiro, K., & Masataka, M. (2019b). Analysis for Advertisement Slogan Generation. In *the 25th Annual Meeting of the Association of Natural Language Processing (NLP2019)*, Nagoya, Japan. Retrieved from https://www.anlp.jp/proceedings/annual_meeting/2019/pdf_dir/P3-12.pdf

AWARDS

NLP 2024 Young Researcher's Encouragement Award (18/427)

📅 Mar. 2024

🌐 Website

NLP 2022 Committee Special Award (16/365)

📅 Mar. 2022

🌐 Website

2021 Microsoft Research Asia Fellowship: Nomination Award

📅 Nov. 2021

🌐 Website

COMMITTEE

JSAI Executive Committee

📅 2024

🌐 Website

INLG2024 Local Organizer

📅 2024

🌐 Website

NLP2024 Executive Committee

📅 2024

🌐 Website

NLP Colloquium

📅 June 2021 –

🌐 Website

NLP Study Group for Doctoral Students Organizer

📅 Dec. 2020 – Mar. 2023

🌐 Website

Young Researcher Association for NLP Studies (YANS) Committee

📅 Mar. 2020 – Mar. 2022

🌐 Website

INVITED TALKS

A Quick Overview to Unlock the Potential of LLMs through Prompt Engineering.

📅 Aug. 2024

📍 Advanced Natural Language Processing (NLP) by Tokyo AI

The Frontiers of Mathematics, Information, and AI

📅 Nov. 2022

📍 Online Seminar for middle and high-school female students by AIP RIKEN

Career Path as a Female Researcher

📅 Nov. 2021

📍 NeurIPS Meetup Japan 2021, Women in Machine Learning (WiML)

Derivation and Use of Templates in Natural Language Generation

📅 Nov. 2021

📍 Special Interest Group on Fundamental Problems in Artificial Intelligence (SIG-FPAI)

Trends in Natural Language Processing at NeurIPS 2019

📅 Mar. 2020

📍 The 78th AI Seminar: AI Trends and Top Conferences debriefing session (NeurIPS2019) by JSAI

A Smart Computer that Understands Language

📅 Nom. 2019

📍 Jissen Gakuen Senior High School, Tokyo

Natural Language Processing

📅 June 2019

📍 Denenchofu High School, Tokyo

SCHOLARSHIP, FELLOWSHIP, AND GRANTS-IN-AID

Research Fellowship for Young Scientists by Japan Society for the Promotion of Science (JSPS)


4,800,000 JPY / APPROX 45,000 USD

📅 Apr. 2021 – Mar. 2023

- The most prestigious fellowship for Ph.D. students in Japan [Acceptance Rate < 20%]


Grant-in-Aid for JSPS Fellows: Research Grant (Grant Number: 21J13602 )

1,500,000 JPY / APPROX 13,500 USD

 Apr. 2021 — Mar. 2023


NeurIPS 2019 Participation Support by the Japanese Society for Artificial Intelligence (JSAI) 

Full support of travel expense and registration fees

 Dec. 2019

Tsubame Scholarship for Doctoral Students by Tokyo Institute of Technology 

480,000 JPY / APPROX 4,300 USD

 Apr. 2020 — Mar. 2021