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/ipsjjip.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

- 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

📄 Under Review

- **Ayana N.**, & Hayate, I. (2024b). AmbigNLG: Addressing Task Ambiguity in Instruction for NLG. arXiv: 2402.17717 `[cs.CL]`

📄 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.JSAI2021.0_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.JSAI2020.0_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

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) Commitee
📅 Mar. 2020 – Mar. 2022   🌐 Website

INVITED TALKS

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