Sosuke Nishikawa

RESEARCH ENGINEER

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Personal Profile Statement

Sosuke Nishikawa is a dedicated research engineer, specializing in the fields of Natural Language Processing (NLP) and Machine Learning. His primary interest lies in the arena of representation learning and information retrieval. Sosuke has a robust familiarity with web application development and an adept understanding of programming languages such as Python, C/C++, and JavaScript. He possesses a love for learning and is always eager to absorb new technologies.

Education

- **M.S. in Information Science and Technology, The University of Tokyo** — *Mar. 2022*
  - Supervisors: Isao Echizen, Yoshimasa Tsuruoka
  - Department Head's Award
- **B.E. in Electrical Engineering and Computer Science, The University of Tokyo** — *Mar. 2020*
  - Supervisor: Yoshimasa Tsuruoka
  - GPA: 3.8/4.2

Publications

REFEREED

[1] Closer Look at the Transferability of Adversarial Examples: How They Fool Different Models Differently

- Futa Waseda, **Sosuke Nishikawa**, Trung-Nghia Le, Huy H. Nguyen, Isao Echizen
- *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2023

[2] EASE: Entity-Aware Contrastive Learning of Sentence Embedding

- **Sosuke Nishikawa**, Ryokan Ri, Ikuya Yamada, Yoshimasa Tsuruoka, Isao Echizen
- *Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL)*, Oral, 2022
- OSS: https://github.com/studio-ousia/ease

[3] A Multilingual Bag-of-Entities Model for Zero-Shot Cross-Lingual Text Classification

- **Sosuke Nishikawa**, Ikuya Yamada, Yoshimasa Tsuruoka, Isao Echizen
- *SIGNLL Conference on Computational Natural Language Learning (CoNLL)*, Oral, 2022

[4] Data Augmentation with Unsupervised Machine Translation Improves the Structural Similarity of Cross-lingual Word Embeddings

- **Sosuke Nishikawa**, Ryokan Ri and Yoshimasa Tsuruoka
- *Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing: Student Research Workshop (ACL-IJCNLP SRW)*, 2021

NON-REFEREED / OTHERS

[5] 検索クエリにおける共起情報を活用した非曖昧ドメイン固有語辞書の構築: ランドマークの事例

- EN title: Building a Dictionary of Unambiguous Domain-Specific Words Leveraging Co-occurrence Information in Search Queries: A Case Study of Landmark
- **Sosuke Nishikawa**, Sota Yamashiro, Hiroki Asano, Shumpei Sano, Manabu Sassano
- *Annual Meeting of the Association for Natural Language Processing (NLP)*, 2023, Domestic Conference

[6] EASE: Entity-Aware Contrastive Learning of Sentence Embedding

- **Sosuke Nishikawa**
- *Journal of Natural Language Processing*, 2022, Commentary Article for a Domestic Journal

[7] エンティティの言語間リンクに基づく多言語モデルの構築
- EN title: Building Multilingual Models based on Inter-Language Links of Entities
- **Sosuke Nishikawa**, Ikuya Yamada, Yoshimasa Tsuruoka, Isao Echizen
- *Annual Meeting of the Association for Natural Language Processing (NLP)*, 2021, Domestic Conference

[8] マルチラベル分類による材料推薦モデル
- EN title: A Model for Recommending Cooking Ingredients Using Multi-Label Classification
- Yusuke Fukasawa, Jun Harashima, **Sosuke Nishikawa**
- *Annual Meeting of the Association for Natural Language Processing (NLP)*, 2021, Domestic Conference

[9] Studio Ousia at the NTCIR-15 SHINRA2020-ML Task
- **NTCIR Conference on Evaluation of Information Access Technologies (NTCIR)**, 2020
- **Sosuke Nishikawa**, Ikuya Yamada
- 1st Place in German and French

[10] 教師なし機械翻訳の出力結果から作成した多言語分散表現の分析
- EN title: Analysis of Cross-Lingual Word Embeddings using Pseudo Corpus Generated from Unsupervised Machine Translation
- **Sosuke Nishikawa**, Yoshimasa Tsuruoka
- *Annual Meeting of the Association for Natural Language Processing (NLP)*, 2020, Domestic Conference

Work Experience

Yahoo Japan Corporation *Tokyo, Japan*
RESEARCH ENGINEER, SCIENCE GROUP *Apr. 2022 - PRESENT*
- Conducted research and development on Japanese NLP services using Python and C++ [5]
- Managed NLP services using Kubernetes

Studio Ousia *Tokyo, Japan*
SOFTWARE ENGINEER (PART TIME) *Jan. 2022 - PRESENT*
- Developed NLP SaaS services utilizing Flask, React, and MySQL
- Developed a SaaS service combining vector document search and Large Language Models

Echizen Lab, National Institute of Informatics *Tokyo, Japan*
RESEARCH ASSISTANT *Apr. 2020 - Mar. 2022*
- Conducted research on Adversarial Examples [1]

Studio Ousia *Tokyo, Japan*
RESEARCH ENGINEER (PART TIME) *Feb. 2020 - PRESENT*
- Conducted research on introducing entity representations into pre-trained language models [2], [3]

Stockmark Inc. *Tokyo, Japan*
SOFTWARE ENGINEER (PART TIME) *Dec. 2018 - Dec. 2019*
- Developed a web application enabling users to quickly discern individuals' areas of expertise

Internship

Integral AI *San Francisco, CA*
RESEARCH ENGINEER INTERNSHIP (THREE-MONTH) *Jan. 2022 - Mar. 2022*
- Conducted research and development on the integration of robotics and large-scale multimodal models

CyberAgent Inc. *Tokyo, Japan*
MACHINE LEARNING ENGINEER INTERNSHIP (ONE-MONTH) *Feb. 2021 - Feb. 2021*
- Developed a system for extracting information from web blog documents

SONY *Tokyo, Japan*
RESEARCH ENGINEER INTERNSHIP (ONE-MONTH) *Sep. 2020 - Oct. 2020*
- Conducted research on dialogue systems and the classification of conversations in text

Cookpad Inc. *Tokyo, Japan*
MACHINE LEARNING ENGINEER INTERNSHIP (TWO-WEEK) *Sep. 2020 - Sep. 2020*
- Developed an API for predicting ingredients from recipes [8]

Wantedly Inc. *Tokyo, Japan*

Machine Learning Engineer Internship (one-month) *Aug. 2020 - Aug. 2020*
- Developed recommendation models using graph embedding

Awards

- Exempted from the Japan Student Services Organization's loan-based scholarship due to outstanding academic achievements — *2022*
- Received the Department Head's Award, Graduate school of information science and technology, The University of Tokyo — *2022*

Skills

Languages	Japanese ($native$), English ($conversant$, IELTS 6.0)
Programming Languages	Python, C/C++, JavaScript/TypeScript, HTML/CSS, MySQL, Java
Libraries and Services	Pytorch, Tensorflow, Docker, Kubernetes, huggingface/transformers, React.js, Next.js
Competitive prog.	Atcoder nchancha (rating 1040)