HIRONA JACQUELINE ARAI

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EDUCATION

University of Southern California Los Angeles, CA   September 2022 - Now
Ph.D. Student at Viterbi School of Engineering in Computer Science
Research in Natural Language Processing with Xiang Ren at INK lab

Middlebury College Middlebury, VT   May 2022
Bachelor of Arts in Computer Science, Minor in Linguistics
Highest Honors in Computer Science, *summa cum laude* (GPA: 3.9/4.0)
Activities: Linguistics Club *President*, Badminton Club, Cycling Club, Japanese Language *Tutor,*
Computer Science *Tutor* (Programming Languages, Software Development, Data Structures)
Relevant Coursework:

- **CS:** Data Structures, Computer Architecture, Theory of Computation, Algorithms & Complexity, Software Dev, Programming Languages, Computer Graphics, Machine Learning, Info Vizualization
- **Linguistics:** Sociolinguistics, Morphology & Syntax, Phonetics & Phonology, Variation and Change in Japanese, Intro Latin, Intro to TESOL, Speech Processing, Philosophy of Language, Modern Logic

Tokyo Gakugei University International Secondary School   March 2018
GPA: 4.8; Dual-Language IB Diploma 40; National Merit Scholar Finalist
Activities: International Committee *President*, Commencement Committee *President*; Badminton Team *Captain*

EXPERIENCE

Middlebury College, Department of Computer Science, Middlebury, VT   Summer-Fall 2021
Research Assistant for John Foley, PhD

- Trained and analyzed neural models for detecting the use of literary devices (metaphor, personification) in poetry with the goal of improving search capabilities in large poetry archive. AUC: 0.71
- Developed silver-standard corpus from Wikipedia text to train a POS-tagger that would be more robust against less-formalized text (poetry, internet speech) to aid parsing and labeling efforts

National Institute of Advanced Industrial Science and Technology, AIRC-KIRT, Tokyo, Japan   Summer 2020
Research Intern for Hiroya Takamura, Eng. D

- Measured semantic change of English for language learners through feature learning and embedding models
- Designed and contributed to an English/Japanese cross-linguistic study of lexical variation

Middlebury College, Department of Linguistics, Middlebury, VT   Winter 2020, Fall 2022
Research Assistant for Sayaka Abe, PhD

- Curated and annotated literature on pragmatics (grammaticalization and semantic change of modal words)
- Generated a dataset on language variation from a Japanese corpus for a joint-department course in Data Science

TEDxYouth@Tokyo, Shibuya, Tokyo   2015 - 2016

- Directed 5 teams (Speaker, Workshop, PR, Tech/Design, Hospitality) of 30 students for annual event of 300 attendees
- Pitched and gained sponsorship of ¥1.25M from corporations eg. Recruit Holdings and Otsuka Pharmaceutical

ADDITIONAL QUALIFICATIONS

Programming Languages: Python (nltk, sklearn), JavaScript (React, D3 & Vega, SQLite), C , Java, R
Awards & Projects:

- Yanai Tadashi Foundation International Scholarship (柳井正財団海外奨学金) (2018-2022)
- Phonology study of English loan words for L1 Japanese speakers with Brandon Baird, PhD
- Educational video about rechargeable batteries for the Breakthrough Junior Challenge with 30k views