

Katsumi Ibaraki

PHD STUDENT IN COMPUTER SCIENCE AND ENGINEERING

University of Notre Dame, Holy Cross Dr, Notre Dame, IN 46556

✉ ibaraki.katsumi@gmail.com | 🏠 <https://kibaraki.github.io/> | 💻 <https://github.com/kibaraki> | 🔗 <https://www.linkedin.com/in/katsumi-ibaraki-a96716177/>

Education

University of Notre Dame

PHD IN COMPUTER SCIENCE AND ENGINEERING

Notre Dame, IN
2024 - Present

University of Michigan

MASTER OF SCIENCE IN COMPUTER SCIENCE AND ENGINEERING

- GPA: 4.00

Ann Arbor, MI
2022 - 2024

Ohio State University

BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND ENGINEERING, BACHELOR OF ARTS IN JAPANESE

- GPA: 3.91

Columbus, OH
2018 - 2022

Research Experience

University of Notre Dame - Computer Science and Engineering

SUPERVISOR: DR. DAVID CHIANG

- Developing data augmentation techniques for low-resource Automatic Speech Recognition
- Analyzing non-speech sounds, such as onomatopoeia

Notre Dame, IN
2024 - Present

University of Michigan - Computer Science and Engineering

SUPERVISORS: DR. RADA MIHALCEA, DR. WINSTON WU

- Analyzing occupational distribution representation in Japanese language models
- Applying audio processing techniques to analyze animal vocalizations

Ann Arbor, MI
2022 - 2024

Publications

Katsumi Ibaraki and David Chiang. 2025. Frustratingly easy data augmentation for low-resource ASR. Preprint, arXiv:2509.15373.

Artem Abzaliev*, **Katsumi Ibaraki***, Kohei Shibata, and Rada Mihalcea. Vocalizations of the Parus minor bird: Taxonomy and automatic classification. In *Proceedings of the International Conference on Animal-Computer Interaction (ACI '24)*, Article 8, pages 1–10, New York, NY, USA. Association for Computing Machinery. (* equal contribution)

Katsumi Ibaraki, Winston Wu, Lu Wang, and Rada Mihalcea. 2024. Analyzing occupational distribution representation in Japanese language models. In *Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024)*, pages 959–973, Torino, Italy. ELRA and ICCL.

Presentations

INVITED TALKS

2025. *From Sound to Script: How AI Learns to Write*. DDDLing Forum & Commons Cafe (TUFiSCo, Tokyo University of Foreign Studies), Online.

Awards, Fellowships, & Grants

2024	Dean's Fellowship , University of Notre Dame	
2022	D. A. Dickey Scholarship , Ohio State University	\$ 2,500
	Maximus Scholarship , Ohio State University	\$ 2,000
2021	D. A. Dickey Scholarship , Ohio State University	\$ 5,000
	Maximus Scholarship , Ohio State University	\$ 4,000
2020	Maximus Scholarship , Ohio State University	\$ 4,000
	D. A. Dickey Scholarship , Ohio State University	\$ 2,500
2019	Maximus Scholarship , Ohio State University	\$ 4,000
	OSU Grant , Ohio State University	\$ 2,000
2018	Maximus Scholarship , Ohio State University	\$ 2,000
	OSU Grant , Ohio State University	\$ 2,000

Work Experience · Teaching Experience

Teaching Assistant, CSE 30151: Theory of Computing

Notre Dame, IN

COMPUTER SCIENCE AND ENGINEERING, UNIVERSITY OF NOTRE DAME

2024 - 2025

- Introduction to formal languages and automata, computability theory, and complexity theory
- Holding office hours and grading assignments

Graduate Student Instructor, COMPFOR 302 Alien Anatomy: How ChatGPT Works

Ann Arbor, MI

COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS, UNIVERSITY OF MICHIGAN

2024

- Developing components of an introductory class for machine learning and large language models, for non-engineering undergraduate students
- Holding office hours, creating assignments, and organizing undergraduate Instructional Assistants

Graduate Student Instructor, SI 650 (EECS 549) Information Retrieval

Ann Arbor, MI

SCHOOL OF INFORMATION/COMPUTER SCIENCE AND ENGINEERING, UNIVERSITY OF MICHIGAN

2023

- Developing components of an information retrieval system, including learning-to-rank and doc2query, for class assignments
- Holding office hours and grading assignments

Program Assistant, SI 650 (EECS 549) Information Retrieval

Ann Arbor, MI

SCHOOL OF INFORMATION/COMPUTER SCIENCE AND ENGINEERING, UNIVERSITY OF MICHIGAN

2023

- Developing key components of an information retrieval system, including the index and ranker, for class assignments

Mathematics Instructor

Novi, MI

JAPANESE SCHOOL OF DETROIT

2022 - 2024

- Instructing high school students on various topics taught in Japan ranging from Algebra to Calculus
- Preparing students for the SAT standardized test math section

English Instructor

Columbus, OH

COLUMBUS JAPANESE LANGUAGE SCHOOL

2021 - 2022

- Taught English grammar and composition to high school students, preparing them for college entrance exams in Japan

Private Tutor

Columbus, OH; Ann Arbor, MI

SELF-EMPLOYED

2017 - 2023

- Tutoring high school students with a focus on mathematics and English
- Preparing students for the EIKEN and TOEFL English Proficiency Exams

Skills_____

PROGRAMMING

- **Programming Languages:** Python, Java, JavaScript, SQL, C++
- **Machine Learning:** PyTorch, TensorFlow, scikit-learn
- **Natural Language Processing / Speech:** NLTK, Hugging Face, epitran, librosa, pydub, soundfile
- **Computer Vision / Multimodal:** OpenCV, Torchvision

Outreach & Professional Development_____

SERVICE AND LEADERSHIP

Organizer

Notre Dame, IN

MIDWEST SPEECH AND LANGUAGE DAYS 2025, UNIVERSITY OF NOTRE DAME

2025

- Coordinated logistics for a two-day regional speech and language research conference, including scheduling, attendee registration, and accommodation.
- Chaired a talk session, introducing presenters and facilitating audience Q&A.

Blog Writer

Ann Arbor, MI

AI LAB, UNIVERSITY OF MICHIGAN

2023 - 2024

- Planning, writing, and editing blog posts for the AI Lab, to share the CSE graduate students' academic experience, research, and opinions.

Vice President

Columbus, OH

JAPANESE STUDENT ORGANIZATION, OHIO STATE UNIVERSITY

2020 - 2021

- Planned and organized Japanese cultural events, overseeing a team of ten board members.
- Successfully attracted 20 to 70 attendees to each online event.

Sponsor Relations

Columbus, OH

JAPANESE STUDENT ORGANIZATION, OHIO STATE UNIVERSITY

2019 - 2020

- Negotiated funding and event planning with sponsors.
- Secured two new sponsors and increased the budget by \$550, representing a 32% increase.