

# Katsumi Ibaraki

PHD STUDENT IN COMPUTER SCIENCE AND ENGINEERING

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

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## 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

- Multilingual and multimodal NLP

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
- Modeling Animal Sounds

Ann Arbor, MI  
2022 - 2024

## Publications

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.

## 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	<b>Maximus Scholarship</b> , Ohio State University	\$ 4,000
	<b>D. A. Dickey Scholarship</b> , Ohio State University	\$ 2,500
2019	<b>Maximus Scholarship</b> , Ohio State University	\$ 4,000
	<b>OSU Grant</b> , Ohio State University	\$ 2,000
2018	<b>Maximus Scholarship</b> , Ohio State University	\$ 2,000
	<b>OSU Grant</b> , Ohio State University	\$ 2,000

## Work Experience · Teaching Experience

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### 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

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- **Programming Languages:** Python, Java, JavaScript, SQL, C++
- **Machine Learning/Natural Language Processing:** PyTorch, Hugging Face, TensorFlow, scikit-learn
- **Multimodal:** OpenCV
- **Web Development:** Ruby on Rails, React, Node.js, Django, HTML/CSS, XML

## Outreach & Professional Development ---

### SERVICE AND LEADERSHIP

#### **Organizer**

*Notre Dame, Indiana*

##### **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 - Present*

- 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.