

Jiyoon Pyo

✉ pyo00005@umn.edu 🌐 yoo-un-ee.github.io 📄 yoo-un-ee

Education

- University of Minnesota** *Sept 2023 – Current*
PhD Student in Computer Science
- Advisor: Dr. Yao-Yi Chiang
- The Cooper Union** *Aug 2019 – May 2023*
MEng in Electrical Engineering
- Advisor: Dr. Carl Sable
 - Thesis: Detection and Replacement of Neologisms for Translation
- The Cooper Union** *Aug 2019 – May 2023*
BEng in Electrical Engineering
- Minor: Computer Science

Publications

- Leveraging Large Language Models for Generating Labeled Mineral Site Record Linkage Data** Oct 2024
Jiyoon Pyo, Yao-Yi Chiang
[10.1145/3687123.3698298](https://doi.org/10.1145/3687123.3698298) [🔗](#)

Research Projects

- AI for Map Geolocation and Extraction to Find Critical Minerals** Sept 2023 - Present
- Sponsored by DARPA
 - Developing a record linkage pipeline to connect records representing the same mineral site accurately.
- Spatio-Temporal Analysis of Street Names** Dec 2023 - Present
- Analyzing spatial and temporal patterns in U.S. street names to uncover historical and regional naming trends
- Automatic Neologism Detection and Translation** Aug 2022 - April 2023
- Developed an automated system for detecting Korean neologisms by compiling lists of emerging terms over specific periods
 - Replaced the identified neologisms with potential terminologies to improve translation quality
 - *Conducted as part of M.Eng degree requirements*
- MCI Detection through Speech Transcripts and EHR Analysis** Aug 2022 - May 2023
- Collaboration with Mount Sinai
 - Analyzed named entities in electronic health records (EHR) and doctor-patient speech transcripts for Mild Cognitive Impairment (MCI) detection
- Sentiment Analysis on Multilingual Survey Data** May 2022 - Aug 2023
- Collaboration with Iceland Air
 - Developed a multilingual sentiment analysis pipeline
 - Evaluated the performance of IceBERT against RoBERTa and XLNet for analyzing customer feedback across different languages
- Sentiment Analysis and Clustering of Customer Exit Surveys** Jan 2022 - May 2022
- Collaboration with Grameen American
 - Develop a clustering algorithm that identifies key reasons for customer attrition based on exit survey data

Experience

Research Intern

Reykjavik University

Reykjavik, IS

May 2022 - Aug 2022

- Contributed to the Icelandic Language Technology 2018-2022 project by researching natural language processing (NLP) techniques
- Analyzed the performance of IceBERT (Icelandic BERT) in comparison to English language models
- Conducted performance evaluations against traditional NLP methods to assess model accuracy and efficiency

Teaching

University of Minnesota

- CSCI1913: Introduction to Algorithms, Data Structures, and Programming

Minneapolis, MN

Fall 2023

The Cooper Union

- PH291: Physics Lab
- ECE303: Communication Networks
- ECE302: Probability Models and Stochastic Processes
- ECE300: Communication Theory
- ECE240: Circuit Analysis

New York, NY

2021 - 2023

Spring 2023

Spring 2023

Fall 2022

Fall 2022