KINAN MARTIN

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EDUCATION

Massachusetts Institute of Technology   **Graduation: May 2024**
Master of Engineering in Computer Science and Cognition   GPA: 4.9 / 5.0

Massachusetts Institute of Technology   **Graduation: May 2023**
Bachelor of Science in Engineering in Computer Science and Cognition   GPA: 4.9 / 5.0

Relevant coursework: Natural Language Processing · Computer Vision (G) · Large Language Models · Artificial Intelligence · Deep Learning (G) · Spoken Language Processing (G) · Computational Cognitive Science (G) · Machine Learning · Laboratory in Psycholinguistics · Data Structures and Algorithms · Programming · Projects in the Science of Intelligence · Discrete Math · Linear Algebra · Probability and Random Variables

EXPERIENCE

Foxconn   **June 2023 – August 2023**
Artificial Intelligence Research Intern   _Taipei, Taiwan_
- Spearheaded project on AI driving assistant with multimodal vision-language models and LLMs
- Designed and implemented novel model architecture and dataset generation pipeline
- Jointly devised and submitted patents for the above (US and Taiwanese patents pending)
- Collaborated with Academia Sinica students to create related video demo for Hon Hai Tech Day 2023

MIT Computational Psycholinguistics Lab   **September 2022 – present**
Student Researcher   _Cambridge, MA_
- Designed and implemented novel probing paradigm for self-supervised spoken language models
- Used Facebook AI's _fairseq_ to quantify how models incl. HuBERT exhibit human-like processing behavior
- Wrote first-author paper accepted to int'l spoken language processing conference INTERSPEECH 2023

MIT   **September 2022 – present**
Teaching Assistant (6.101 Fundamentals of Programming)   _Cambridge, MA_
- Taught 600+ students by helping solve/debug assignments and fostered good coding practices in weekly labs
- Led weekly staff meetings and taught 30+ fellow lab assistant staff best practices in helping students
- Jointly created and tested problem sets and maintained class server front-end and back-end

University of Chile   **June 2022 – August 2022**
Student Researcher   _Santiago, Chile_
- Co-authored paper on training word embeddings for Spanish clinical use published in int'l journal _Frontiers._
- Implemented NLP models for int'l computational linguistics competition (SMM4H 2022: SocialDISNER): scored 2nd place on eval metric. Co-authored corresponding paper published by _ACL_.

SELECTED PROJECTS

Arabic part of speech marking extension (na7w)   **January 2024**
Created Chrome extension to mark parts of speech of Arabic text on webpages
Problem solving with Large Language Models via context augmentation   **April 2023**
Devised and implemented a set of LLM context augmentation methods to improve performance at problem solving
Speech to speech translation model   **May 2022**
Built novel speech to speech translation pipeline, wrote corresponding paper describing methodology
Querying neural representations of language with EEG data   **November 2021**
Used novel EEG dataset from child epilepsy patients to investigate neural responses to linguistic features
Grapheme to phoneme RNN model   **May 2021**
Built Pytorch LSTM models to predict the pronunciation of novel words given their spellings for arbitrary languages

SKILLS AND ACHIEVEMENTS

Foreign Languages   Japanese, French, Russian, Arabic, Spanish, Chinese; learning Korean, Vietnamese, and more
Coding Languages   Python, *nix/Bash, MATLAB, R, JavaScript, HTML/CSS, LaTeX
Software & Tools   git, pytorch, numpy, pandas, SQL, sklearn, Colab, slurm, NLTK, Stanza, GCP, Praat, MTurk

- Passed highest level of the international Japanese Language Proficiency Test (JLPT N1) in the 96th percentile (2017).
- Ron Brown Scholarship Scholar (2019-2023)
- First Place in Russian Poetry Recitation, Second Place in Speech Contest at New England Olympiada of Spoken Russian at Harvard University (2020).