Hannah Kimura

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EDUCATION

Wellesley College Wellesley, MA
Bachelor of Arts- Computer Science Major, GPA: 3.7/4.0 May 2024

- *Relevant Coursework*: Data Structures; Multivariable Calculus; Combinatorics and Graph Theory; Linear Algebra; Foundations of Computer Systems; Mobile App Development; Theory of Computation

Massachusetts Institute of Technology Cambridge, MA
Cross-Registered Student, GPA: 4.6/5.0 May 2024

- *Relevant Coursework:* Fundamentals of Programming; Introduction to Algorithms; Introduction to Machine Learning; Software Construction; Software Design; Probability and Random Variables; Computer Language Engineering; Design and Analysis of Algorithms

EXPERIENCE

InterSystems Boston, MA
Solutions Development Program July 2024-Present

MIT CSAIL, COMMIT Group Cambridge, MA
Undergraduate Researcher Jan-June 2024

- Developed Python tools for representing languages and efficiently manipulating them
- Implemented an ADT that automatically converts an Abstract Syntax Description Language (ASDL) grammar into a Python implementation that includes one class for every ASDL type, and one subclass for every constructor in each of those types
- Implemented features such as memoization, automatic type conversion, and support for the visitor pattern

MIT Department of Brain and Cognitive Sciences, TEDLAB Cambridge, MA
Undergraduate Researcher Feb 2023- Present

- Used large language models (GPT-3) and psycholinguistic phonological theory to extract information from natural language.
- Developed a web app for an auditory experiment in psycholinguistics, coding the front end (JavaScript, CSS, HTML) and backend (Python, Flask, MySQL)
- Presented the study at MIT in a cognitive science lab meeting, facilitating a discussion in a group of professors, postdocs, and graduate students.

MIT Media Lab, Center for Constructive Communication Cambridge, MA
Undergraduate Researcher Jan-June 2023

- Employed fundamental NLP models to develop a predictive model for tweet polarization.
- Classified 2000 tweets into positive, neutral, and negative categories and further distinguished affective polarization or political polarization.
- Implemented a random forest classifier to discern and predict affective and partisan polarization.

Thermo Fisher Scientific Carlsbad, CA
Data Science Intern May-Aug 2022

- Utilized NumPy and Pandas to analyze and interpret fiscal trends associated with Catalog Products.
- Developed a forecasting model with regression and quarterly trend analysis, improving quarterly revenue prediction accuracy by 58%.
- Transformed sporadic data into smooth data by applying a 12-month rolling sum and segmenting the data into groups that had similar trends.
- Employed an ARIMA model, VAR model, and exponential smoothing model to cross validate prediction accuracy.

PROGRAMMING LANGUAGES & TOOLS

- TypeScript; JavaScript; Python; Rust; HTML; CSS; Pandas; NumPy; MongoDB; Firebase; React.js; Vue.js; Jekyll; GIT; ANTLR