Luisa Li

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Education

Northeastern University – Boston, Massachusetts **May 2026**
Candidate for B.S. in Computer Science and Mathematics, Khoury College of Computer Sciences GPA: 3.9/4.0

- Honors: Honors Scholarship, Dean's List, Mathworks DMSB Scholarship, PEAK Award
- Relevant coursework: Algorithms and Data Structures, Object Oriented Design, Linear Algebra, Probability and Statistics

Experience

Programming Research Laboratory, Northeastern University – Boston, MA **January 2023 - Present**
Undergraduate Research Assistant

- Contributed to CanItEdit, a code-editing benchmark that evaluates Large Language Model's performance on sophisticated and diverse code editing tasks that demand domain-specific knowledge.
- Wrote code to evaluate open and closed source models using our benchmark problems and metrics such as Pass@1.
- Co-authored the CanItEdit paper and presented at LLM4Code (ICSE Workshop). Paper accepted at COLM 2024.

Montai Therapeutics – Cambridge, MA **January 2024 - June 2024**
Computational Modeling Co-op

- Contributed to bioactivity machine learning model development using PyTorch, incorporated weighting and ensembling features and performed detailed analysis demonstrating performance improvement over original model.
- Built interpretable machine learning models to predict druglikeness in compounds, wrangling data from public and proprietary databases. Iteratively improved model design through continuous feedback and ablation experiments.
- Worked on cross-team engineering efforts in streamlining model training, prediction and evaluation pipelines, and built Streamlit apps that queries models and visualizes results to increase accesibility of models to biologically focused teams.

Khoury College of Computer Science, Northeastern University – Boston, MA **September 2023 - December 2023**
Teaching Assistant for Fundamentals of Computer Science

- Directed weekly lab sessions, wrote reference solutions and test suites, hosted office hours and graded weekly homework

Research Experience for Undergraduates (REU), Northeastern University – Boston, MA **May 2023 – June 2023**
Undergraduate Research Assistant, Project on Equivariant Convolutional Neural Networks

- Researched Convolutional Neural Networks (CNNs) and potential extensions to current architectures through group theory, which adds other forms of equivariance properties to standard CNN models.
- Collaborated with fellow researchers to code, train and test CNN architectures such as ResNet and GoogLeNet in Python with PyTorch on the CIFAR10 dataset, which consists of 70K total images split into 10 classes.
- Developed group equivariant neural networks that extends a normal CNN to be equivariant to rotations and reflections.

Technical Skills

Languages: *Proficient*: Python, Java | *Familiar*: SQL, Racket, Javascript, HTML, CSS
Skills: Git, Pandas, Numpy, scikit-learn, PyTorch, AWS (S3, Batch, EC2), Conda, OOP, NLP

Projects

gender-sender (github.com/elizabeth-mcdowell/gendersender) **October 2023**

- Created a website that helps users edit their emails to be either more direct or more polite, with the idea to subvert the gender expectation that women should email differently to men.
- The application is built with a React and Typescript frontend, Python, FastAPI and OpenAI's API in the backend.
- This project won Best Overall Hack at Hack the Patriarchy Hackathon.

scratch-ml (github.com/luisa-li/scratch-ml) **July 2024 – Present**

- A collection of projects building machine learning algorithms from scratch for learning purposes.
- Current finished projects include linear regression with gradient descent, principal component analysis, and Word2Vec.

Publications

F. Cassano, **L. Li,** A. Sethi, N. Shinn, A. Brennan-Jones, J. Ginesin, E. Berman, G. Chakhnashvili, A. Lozhkov, C. J. Anderson, A. Guha. "Can It Edit? Evaluating the Ability of Large Language Models to Follow Code Editing Instructions." Conference on Language Modeling (COLM).