Laerdon Kim

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Education

Cornell University Ithaca, NY
B.A., Computer Science, Mathematics — **GPA: 4.14/4.0, Milstein Scholar** *Expected May 2028*
Activities: **Academic Team Lead** on the Association of Computer Science Undergraduates

Experience

Illinois Institute of Technology June 2024 – August 2024
Machine Learning Research Assistant *Chicago, Illinois*

- Utilized z-score and absolute value threshold outlier masking methods on LLaMA 2, resulting in a **6% reduction in perplexity and 13% reduction in memory usage.**
- Studied ML efficiency and quantization methods; implemented SmoothQuant and LLM-AWQ on OPT-8B for text completion inference. Advised by Prof. Yan Yan and Haoxuan Wang.
- Conducted research project on distributional semantics comparing dimensionality algorithms T-SNE, PCA, and MDS using Gensim Word2Vec.

Office of Senator Martwick June 2023 – August 2023
Outreach Director Intern *Chicago, Illinois*

- Project lead for **census-based district canvass in 87 neighborhood tracts.** Used Python, NGPVan, and VoteBuilder to deliver targeted social services (rent assistance, food stamps, elderly care) access to 135K constituents.
- Designed government literature providing information on social program availability in Photoshop. Scooped snow cones for kids at block parties.

Innocuous AI May 2023 – August 2023
Web Development Intern *New York, NY*

- Developed startup website in Webflow and coded a branded landing page to be used in pitches, including assets designed in Figma and Photoshop. Improved accessibility and readability for vision-impaired users.
- Applied principles of responsive web design to decrease site loading time: removing extraneous classes and replacing large images with Lottie animations.

Projects

Natural Language Processing Student Research September 2024 – Present

- Published *A Baseline for Self-state Identification and Classification in Mental Health Data: CLPsych 2025 Task* in NAACL 2025's CLPsych Workshop. Paper available at https://arxiv.org/abs/2504.14066 .
- Conducted research project **tracking semantic change over time** with BERT in a paper replication study of Liu et. al, 2021. Used statistical evaluation methods: permutation tests, False Discovery Rate (FDR) correction.
- Modernized ConvoKit, a conversational analysis toolkit developed at Cornell, by adding a modular wrapper class to enable usage of HuggingFace and custom-trained models. Advised by Prof. Lillian Lee and Prof. Cristian Danescu-Niculescu-Mizil.

Messenger Clone | *Prototype iOS messaging application* May 2021 – June 2022

- Designed full-stack real-time messaging application using **Firebase Realtime Database and Cloud Functions with FCM notification integration.** Included on GitHub.
- Application includes features such as profile caching, contact index searching, and Google sign-in API.

EngagingWorlds | *Educational technology simulation platform* May 2023 – May 2023

- Served on business team for educational simulation platform translating popular novels into an interactive experience. **Earned 1st place at MIT Sloan AI + Education Hackathon.**
- Developed Flask backend with Claude API to convert conversation transcripts into class analytics for educators.

Data Analysis on Housing Redevelopment in Boston May 2023 – May 2023

- Using QGIS, analyzed and visualized econometrics data from the Opportunity Atlas, a quantitative data analysis tool comparing disparate potential for social mobility throughout the U.S.
- Presented to Harvard University's Opportunity Insights Laboratory and Prof. Raj Chetty.

Technical Skills

Languages: Java, Swift, Python, Haskell, HTML/CSS/JS
Tools: PyTorch, Git, Firebase, React, Flask