Christina Chance

Natural Language Processing · Fairness & Ethics · Machine Learning
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EDUCATION

University of California at Los Angeles 2022 – Present
Ph.D. in Computer Science GPA: 3.85
Eugene V. Cota-Robles Fellow. Advisor: Prof. Kai-Wei Chang

Emory University 2018 – 2022
B.S. in Computer Science and Mathematics, minor in Physics GPA: 3.75
Magna Cum Laude.

RESEARCH EXPERIENCE

UCLA Natural Language Processing Lab September 2022 – Present
Graduate Student Researcher, advised by Prof. Kai-Wei Chang

- ⋆ **Will the Prince Get True Love's Kiss? On the Model Sensitivity to Gender Perturbation over Fairytale Texts [under review]**
  - · Showed model sensitivity to gender perturbed fairytale text suggesting gender and stereotype bias present in the model finetuned on the FairyTaleQA dataset.
  - · Proposed a novel method for Counterfactual Data Augmentation (CDA) using the power of Large Language Models (LLMs) to support a more robust domain of text.
  - · Conducted a series of tests and found improved performance on gender perturbed text when finetuned on a combination of the original and perturbed training sets.
- ⋆ **CORAAL QA: A Dataset and Framework for Open Domain Spontaneous Speech Question Answering from Long Audio Files [under review]**
  - · Co-curated a dataset of extractive questions and audio time spans from the Corpus of Regional African American Language (CORAAL) dataset.
  - · Helped design and implement a framework for spontaneous speech question-answering information retrieval task.
  - · Leveraged LLMs to generate further training examples and assessed the quality and usability of the generated examples.
- ⋆ **An Analysis of Large Language Models for African American English Speaking Children's Oral Language Assessment [under review]**
  - · Evaluated the performance of open-source automatic speech recognition systems (Whisper, HuBERT, Wav2Vec2) for the transcripts of primarily African-American English-speaking children.
  - · Investigated a diverse set of metrics to assess AAE children's speech for educational use to avoid biases around variations of the dialect compared to Standard American English.
  - · Showed the capability of non-standard educational speech metrics to capture comprehension accuracy.
- ⋆ **Machine Learning Research Transparency through Positionality Statements [under review]**
  - · Argued the impact and importance of positionality statements in ML papers to provide transparency to the readers.
  - · Suggested a framework to include more reflexivity in the research process and provided instances where positionality statements benefit the intellectual community in qualitative fields.

Arnold Lab at Emory University August 2021 – August 2022
Undergraduate Research Assistant/ Honors Thesis, advised by Prof. Dorian Arnold

- ⋆ **Zoom Audio Transcription Accuracy for African American Vernacular English**

Bhasin Systems Biomedicine Lab at Emory University August 2020 – August 2021
Undergraduate Research Assistant/ Honors Thesis, advised by Dr. Manoj Bhasin

⋆ **TCRQuant**
  · Assisted in implementing TCRQuant online tool to support analysis of t-cell receptor sequencing; translated command-line tool to run on the public server using PHP, Javascript, R, and web developing and styling tools.

⋆ **Gene Splicing Database**
  · Created a gene splicing database to support data around the splice junctions in pediatric patients with Acute Myeloid Leukemia

WORK EXPERIENCE

Google LLC May 2021 – August 2021
Software Engineering Intern, advised by Danny Qiu and Nolan Eastin

- Designed and implemented a feature to provide Google Cloud Storage customers with the ability to further protect their data by asymmetrically encrypting their Customer Supplied Encryption Key with a JSON payload using Java, Python, and C+.
- Utilized Tink, an open-source encryption library, and customer documentation to provide users with an approachable and improved encryption process.

Google LLC May 2020 – August 2020
Student Training in Engineering Program Intern, advised by Sergei Karseko and Lian Wu

- deated, designed, and executed Covidiena, a web application for university students during the COVID pandemic to track health and stay updated with their school announcements and information.
- Implemented user authentication using HTTP Sessions and hashing to ensure individualized user experiences and allow multiple users using Cloud Datastore.

Google LLC May 2019 – August 2019
Engineering Practicum Intern, advised by Filipe Ribiero and Tongfei Guo

- Created a system that generates simple explanatory summaries of top contributions to a change in metrics utilizing past data, differing dimensions, and relative metrics of interest with Python and GoogleSQL.
- Constructed backend that generated complex SQL statements based on performance metrics and manipulated data to perform trend analysis.

TEACHING EXPERIENCE

- Head Teaching Assistant for Stanford CS221 (Artificial Intelligence), Summer 2019, with instructor Robin Jia. Managed a team of 6 TAs and 100+ students, taught sections, held office hours, and mentored several students.
- Teaching Assistant for Stanford CS224n (NLP with Deep Learning), Winter 2020, with Prof. Christopher Manning. Worked with a team of 23 TAs for 450+ students, taught sections, held office hours, and mentored 10+ student course project teams.
- Teaching Assistant for Stanford CS224n (NLP with Deep Learning), Winter 2019, with Prof. Christopher Manning. Worked with a team of 20 TAs for 400+ students to develop new assignments and re-implement existing assignment code in PyTorch. Held office hours and mentored 10+ student course project teams.
- Teaching Assistant for Stanford CS221 (Artificial Intelligence), Autumn 2018, with Prof. Percy Liang and Kelvin Guu. Worked with a team of 15 TAs for 400+ students to refine course assignments. Held office hours and mentored 10+ student course project teams.

COMMUNITY ENGAGEMENT

- Institute for African-American Mentoring in Computing Sciences Mentor, 2023 - Present.
- ACM SIGKDD KDD 2023 Equity, Diversity, Inclusion Day Workshop Co-Organizer and Panelist.
- ACM FAccT 2023 Volunteer.
- Graduate Women in Computer Science at UCLA Treasurer and Executive Board Member, 2022 - Present.

- Black Graduate Student Alliance at UCLA Historian, 2022-23
- Black & Latinx in STEM at Emory University Co-Founder and President, 2019-22.

PROFESSIONAL AND ACADEMIC AFFILIATIONS

- Hartford Youth Scholars, Cohort 7.
- Ron Brown Scholars Captain, 2018.
- Girls for Technology, 2017-22.
- Initiative for Maximizing Student Development (IMSD) Scholar, 2020-22.
- Emory's Scholarly Inquiry and Research at Emory (SIRE) Program, 2020-21.
- Alpha Sigma Chapter of Eta Sigma Pi, Spring 2020 Initiate.
- Emory University's Circle of Omicron Delta Kappa, Spring 2020 Initiate.
- Nu Alpha Chapter of Alpha Kappa Alpha Sorority Incorporated, Spring 2021 Initiate.
- Emory University's Chapter of Alpha Psi Omega, Spring 2022 Initiate.

AWARDS

- Eugene V. Cota-Robles Fellow, awarded by UCLA 2022-27.
- 100 Senior Honorary, awarded by Emory University 2022.
- Computer Science Outstanding Student of the Year, awarded by Emory University 2022.

RELEVANT COURSEWORK

Undergraduate	Data Structures and Algorithms, Database Systems, Intro to Data Justice, Machine Learning Algorithms Artificial Intelligence, Analysis of Algorithms, Linear Algebra
Graduate	Deep Learning, Natural Language Processing, Mathematical Aspects of Scientific Computing: Linear Algebra, Fairness & Accountability in Natural Language Processing

SKILLS

Programming	Python, PyTorch, SQL, Java (proficient) PHP, MATLAB, HTML (basic)
Extra-curricular	Vibez Caribbean Dance Troop (performer and member 2018-22) Theater (Stage manager for two productions at Emory University, 2021 and 2022) Track & Field (Three-year varsity athlete, 2015-18)