

# Christina Chance

Natural Language Processing · Fairness & Ethics · ML for Social Justice  
cchance@cs.ucla.edu · <https://christinachance.github.io/> · (she/her)

## EDUCATION

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<b>University of California at Los Angeles</b> Ph.D. in Computer Science <i>Eugene V. Cota-Robles Fellow</i> . Advisor: Prof. Kai-Wei Chang	2022 – Present GPA: 3.85
<b>Emory University</b> B.S. in Computer Science and Mathematics, minor in Physics <i>Magna Cum Laude</i> .	2018 – 2022 GPA: 3.75

## RESEARCH EXPERIENCE

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**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 [pre-print]**
  - 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 [ICASSP 2024]**
  - 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 [NSBE Best Volume 1]**
  - 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.
- ★ **Leveraging Language Models to Detect Greenwashing [pre-print]**
  - Collaborated with the Open For Good Project at UCLA Anderson School of Management to systematically assess corporate climate reports for the risk of greenwashing.
  - Analyzed the ability of ClimateBERT to learn markers of greenwashing present in corporate reports and developed a mathematical formulation to quantify greenwashing risk.

**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, 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

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### **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*

- Ideated, 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 Ribeiro 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

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- Teaching Assistant for UCLA CS162 (Natural Language Processing), Winter 2024, taught by Prof. Nanyun (Violet) Peng. I worked with a team of 1 other TA and about 130 students, helped create and grade assignments, exams, and course project, led a weekly discussion section, and hosted office hours to support students.
- Teaching Assistant for UCLA CS30 (Principles and Practices of Computing), Fall 2023, taught by Prof. Todd Millstein. I worked with a team of 1 other TA and about 120 students, helped grade assignments, led a weekly discussion section, and hosted office hours to support students.
- Teaching Assistant for Emory University CS377 (Database Systems), Spring 2022, taught by Prof. Nosayba El-Sayed. I worked with a team of 1 other TA and about 40 students, helped grade assignments, and hosted office hours to support students.

## COMMUNITY ENGAGEMENT

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- Graduate Women in Computer Science at UCLA Treasurer and Executive Board Member, 2022 - Present.
- Black Graduate Student Alliance at UCLA Historian & Treasurer, 2022- Present.
- 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.
- Black & Latinx in STEM at Emory University Co-Founder and President, 2019-22.

## PROFESSIONAL AND ACADEMIC AFFILIATIONS

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- 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

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- 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

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

## SKILLS

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<b>Programming</b>	Python, PyTorch, SQL, Java (proficient) PHP, MATLAB, HTML (basic)
<b>Extra-curricular</b>	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)