

# Eleanor M. Lin

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## Education

**Columbia University, Columbia College, New York, NY**

September 2020 – May 2024

Bachelor of Arts, Computer Science & Linguistics

GPA: 4.1/4.0; Dean's List all semesters; Phi Beta Kappa and Upsilon Pi Epsilon member

## Publications

**Eleanor Lin.** 2024. Developing Performant Models for Speech-to-Speech Translation Between English and Taiwanese Using Free and Publicly Available Data. (*Undergraduate thesis in preparation*)

**Eleanor Lin**, James Hale, and Jonathan Gratch. 2023. Toward a Better Understanding of the Emotional Dynamics of Negotiation with Large Language Models. In *The Twenty-fourth International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing (MobiHoc '23)*, October 23–26, 2023, Washington, DC, USA. ACM, New York, NY, USA, 545–550. <http://doi.org/10.1145/3565287.3617637>.

Run Chen, **Eleanor Lin**, Shayan Hooshmand, Mariam Mustafa, Rose Sloan, Ritika Nandi, Alicia Yang, Andrea Lopez, Ansh Kothary, Isaac Suh, Catherine Lyu, Eric Chen, Sophia Horng, and Julia Hirschberg. 2023. RASwDA: Re-Aligned Switchboard Dialog Act Corpus for Dialog Act Prediction in Conversations. (*Accepted to IWSDS 2024*)

Run Chen, Haozhe Chen, Anushka Kulkarni, **Eleanor Lin**, Linda Pang, Divya Tadimet, and Julia Hirschberg. 2023. Detecting Empathy in Speech. (*Submitted to Speech Prosody 2024*)

**Eleanor Lin** and Jessica Li. 2021. Students find community through Columbia Confessions. *Columbia Daily Spectator*. [www.columbiaspectator.com/news/2021/11/19/students-find-community-through-columbia-confessions/](http://www.columbiaspectator.com/news/2021/11/19/students-find-community-through-columbia-confessions/)

## Presentations

Columbia University Undergraduate Research Symposium, New York, NY, October 2022. **Eleanor Lin**, Ziyang Yang, and Vicente Ordóñez. "Text-Based Prediction of Visual Complexity: How Does What We See Influence What We Say?" Poster presentation. [[Paper](#)] [[Slides](#)] [[Poster](#)] [[Code](#)]

## Grants, Awards, and Academic Honors

**Outstanding Undergraduate Researcher Award - Honorable Mention**, Computing Research Association 2023

**Junior Phi Beta Kappa**, Columbia University 2023

*The highest scholastic distinction in the Columbia College Class of 2024 (awarded to top 2% of students)*

**Upsilon Pi Epsilon International Honor Society Member**, Columbia University 2023

*In recognition of GPA in the top 15% for computer and information science juniors and seniors at Columbia*

**REU Travel Grant**, National Science Foundation 2023

*Awarded \$1200 to attend and orally present first-authored paper at MobiHoc '23 conference*

**NSF Research Experiences for Undergraduates Intern**, University of Southern California 2023

**Fulbright-Hays Scholarship (Declined)**, American Councils for International Education 2023

**Distributed Research Experiences for Undergraduates Intern**, Computing Research Association 2022

*Awarded \$7000 to conduct research at Rice University with Professor Vicente Ordóñez-Román*

**Computer Science Research Mentorship Program Scholar**, Google 2021

## Research Experience

**Speech Lab, Columbia University**

January 2022 – Present

*Research Assistant (Adviser: Professor Julia Hirschberg)*

*New York, NY*

Investigate pragmatic factors in code-switching by developing dialog act annotation scheme for code-switched speech. Discovered positive association between empathy and code-switching by detecting empathetic utterances in code-switched Mandarin-English speech, using RoBERTa fine-tuned for empathy detection. Fine-tuned Wav2Vec2 for end-to-end dialog act classification on Switchboard Dialog Act Corpus, using PyTorch and Hugging Face Transformers. Processed video, audio, and text with Python, Praat, and FFmpeg, for multilingual empathetic speech corpus.

**Affective Computing Lab, University of Southern California***REU Intern (Adviser: Professor Jonathan Gratch)*

May 2023 – August 2023

Los Angeles, CA

Developed negotiating agent for online studies of human negotiation behaviors. Engineered large language model prompts for agent NLU/NLG with OpenAI API. Built user interface using HTML, CSS, JavaScript, Flask. Assembled Qualtrics survey for crowdworkers to evaluate agent. Lead author of paper published in proceedings of *MobiHoc '23*.

**Vision, Language, and Learning Lab, Rice University***Visiting Student Researcher (Adviser: Professor Vicente Ordóñez-Román)*

May 2022 – July 2022

Houston, TX

Quantified visual and linguistic complexity in MSCOCO image captioning dataset by creating and applying novel visual complexity metric. Fine-tuned BERT to predict visual complexity from image captions and probed and mitigated its content-related biases. Presented poster at Columbia University's 2022 Undergraduate Research Symposium.

**Natural Language Text Processing Lab, Columbia University***Data Annotator (Supervisor: Fei-Tzin Lee)*

October 2021 – December 2021

New York, NY

Generated Abstract Meaning Representation semantic annotations for literary domain text generation.

**Cortez Lab, Columbia University***Research Assistant (Adviser: Katherine Moore)*

March 2021 – June 2021

New York, NY

Identified communication strategies in collaborative learning dialogues by annotating speech acts and analyzing  $n$ -gram frequencies with R. Onboarded research assistants to annotate measures of learning success.

**Teaching Experience****Columbia LING4903: Syntax***Teaching Assistant*

September 2023 – December 2023

New York, NY

Introduction to modern formal theories of syntax. Hold office hours, take attendance, and grade assignments.

**Columbia COMS3251: Computational Linear Algebra***Course Assistant*

September 2022 – December 2022

New York, NY

Introduced linear algebra and its applications to mathematical modeling with Python via weekly office hours.

**Columbia COMS1404: Emerging Scholars Program Seminar***Workshop Assistant*

September 2021 – May 2022

New York, NY

Facilitated introductory computer science seminar to increase retention of diverse undergraduates.

**Work Experience****Columbia Daily Spectator***Data Journalist*

October 2021 – May 2022

New York, NY

Reported stories incorporating data analysis and visualization using Python, Adobe Illustrator, HTML, and CSS.

**Service****Columbia University Application Development Initiative***Mentor for Computer Science Mentorship Program*

October 2022 – Present

New York, NY

Currently supporting a Columbia University first-year undergraduate (and previously supported a second-year undergraduate) majoring in computer science with one-on-one academic and preprofessional advising.

**Activities****Quarto Magazine***Contributor*

November 2021 – Present

New York, NY

Published 5 poems (11 forthcoming) in official magazine of Columbia's Undergraduate Creative Writing Program.

**Skills**

**Technical:** Python (PyTorch, Keras, Hugging Face Transformers, scikit-learn), C, Java, Git, LaTeX, Praat, FFmpeg

**Languages:** Advanced Mandarin Chinese, advanced German, advanced Latin