

# Eleanor M. Lin

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## Education

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**University of Michigan, College of Engineering***Doctor of Philosophy, Computer Science & Engineering* (GPA: 4.0/4.0)

Ann Arbor, MI

*Expected May 2029*Honors: National Science Foundation Graduate Research Fellow, Institutional Nominee for the Google PhD Fellowship Program**National Tsing Hua University, College of Humanities and Social Sciences***Taiwan Intensive Summer Language Program Student* (GPA: 4.0/4.0)

Hsinchu, TW

*June 2024 – August 2024*

Transcript issued and credit awarded through Bryn Mawr College.

**Columbia University, Columbia College***Bachelor of Arts, Computer Science & Linguistics* (GPA: 4.1/4.0)

New York, NY

*September 2020 – May 2024*Honors: *Summa cum Laude*, Junior Phi Beta Kappa, Dean's List, Departmental Honors in Linguistics, Computer Science Scholarship Award, Upsilon Pi Epsilon.Thesis: Developing Performant Models for Translating Spoken Taiwanese Into Spoken English Using Free and Publicly Available Resources. [[Thesis](#)]

## Publications

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*Refereed Publications*

**Eleanor Lin** and David Jurgens. 2025. Let's Think 一步一步: A Cognitive Framework for Characterizing Code-Switching in LLM Reasoning. *39th Conference on Neural Information Processing Systems (NeurIPS 2025) Workshop: First Workshop on CogInterp: Interpreting Cognition in Deep Learning Models*. San Diego, CA. [[Blog post](#)] [[Poster](#)]

Debasmita Bhattacharya\*, **Eleanor Lin**\*, Run Chen, and Julia Hirschberg. 2024. Switching Tongues, Sharing Hearts: Identifying the Relationship between Empathy and Code-switching in Speech. *INTERSPEECH*. Kos, Greece. (\*DB and EL are equal contributors to this work and are designated as co-first authors.) [[Paper](#)]

Run Chen, Haozhe Chen, Anushka Kulkarni, **Eleanor Lin**, Linda Pang, Divya Tadimeti, Jun Shin, and Julia Hirschberg. 2024. Detecting Empathy in Speech. *INTERSPEECH*. Kos, Greece. [[Paper](#)]

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. 2024. RASwDA: Re-Aligned Switchboard Dialog Act Corpus for Dialog Act Prediction in Conversations. *International Workshop on Spoken Dialogue Systems Technology*. Sapporo, Japan. Accepted as poster presentation. [[Paper](#)]

**Eleanor Lin**, James Hale, and Jonathan Gratch. 2023. Toward a Better Understanding of the Emotional Dynamics of Negotiation with Large Language Models. *8th National Workshop for REU Research in Networking and Systems at the Twenty-fourth International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing*. Washington, DC. Accepted as oral presentation. [[Paper](#)]

*News Articles*

**Eleanor Lin** and Jessica Li. 2021. Students find community through Columbia Confessions. *Columbia Daily Spectator*. [[Article](#)]

## Presentations

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University of Michigan Human-Centered AI (HCAI) Symposium, Ann Arbor, MI, October 2025. **Eleanor Lin** and David Jurgens. "Let's Think 一步一步: A Cognitive Framework for Characterizing Code-Switching in LLM Reasoning." Poster presentation. [[Blog post](#)] [[Poster](#)]

University of Michigan Annual Data Science & AI Summit, Ann Arbor, MI, October 2025. **Eleanor Lin** and David Jurgens. “Let’s Think 一步一步: A Cognitive Framework for Characterizing Code-Switching in LLM Reasoning.” Poster presentation. [[Blog post](#)] [[Poster](#)]

Michigan AI Symposium, Ann Arbor, MI, October 2025. **Eleanor Lin** and David Jurgens. “Let’s Think 一步一步: A Cognitive Framework for Characterizing Code-Switching in LLM Reasoning.” Poster presentation. [[Blog post](#)] [[Poster](#)]

NLP @ Michigan Day, Ann Arbor, MI, March 2025. **Eleanor Lin**. “Investigating Code-Switching as a Cognitive Tool in Large Language Model Reasoning.” Poster presentation. [[Poster](#)]

Annual Conference of the International Association for Conflict Management (IACM), Singapore, June 2024. James Hale, **Eleanor Lin**, Ian Wu, Zora Rong, Kushal Chawla, Gale Lucas, and Jonathan Gratch. “Instilling discipline in LLM-based negotiating agents.” Symposium talk. [[Abstract](#)]

Emory Undergraduate Linguistics Conference, Online, April 2024. **Eleanor Lin**. “Toward a Sociolinguistic Profile of Taiwanese Americans.” Oral presentation. [[Working Paper](#)] [[Slides](#)]

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

<b>Rackham Conference Travel Grant (\$900)</b> , University of Michigan <i>Awarded to cover the cost of travel for the NeurIPS 2025 conference.</i>	2025
<b>Computer Science &amp; Engineering Student Funding (\$375)</b> , University of Michigan <i>Awarded \$375 to cover the cost of registration for the NeurIPS 2025 conference.</i>	2025
<b>Institutional Nominee for the Google PhD Fellowship Program</b> , University of Michigan <i>One of up to 4 candidates from the University of Michigan selected through a competitive application process.</i>	2025
<b>Graduate Research Fellowship (\$159,000)</b> , National Science Foundation	2025
<b>Institutional Nominee for the Google PhD Fellowship Program</b> , University of Michigan <i>One of up to 4 candidates from the University of Michigan selected through a competitive application process.</i>	2025
<b>Columbia College Dean’s List</b> , Columbia University	2020 – 2024
<b>Departmental Honors in Linguistics</b> , Columbia University Linguistics Program <i>One of two graduating linguistics majors selected for honors, on the basis of the quality of the senior thesis.</i>	2024
<b>Computer Science Scholarship Award (\$256)</b> , Columbia University Department of Computer Science <i>One of two graduating B.A. candidates selected annually on the basis of “outstanding academic achievement in computer science.”</i>	2024
<b>Work Exemption Program Grant (\$1,820)</b> , Columbia University <i>Financial aid to support pursuit of research in the Columbia Speech Lab.</i>	2024
<b>Fulbright-Hays Group Projects Abroad Fellowship (\$7,000)</b> , American Councils for International Education <i>Awarded to study Mandarin Chinese through the Taiwan Intensive Summer Language Program. Conducted post-program outreach: organized information session in partnership with Columbia University Undergraduate Global Engagement, presented study abroad opportunities to 27 students in 2 undergraduate Chinese language classes at the University of Michigan, authored blog post for American Councils’ website.</i>	2024
<b>Study Abroad Need-Based Scholarship (\$1,000)</b> , American Councils for International Education	2024
<b>Study Abroad Diversity and Inclusion Scholarship (\$1,000)</b> , American Councils for International Education	2024
<b>Outstanding Undergraduate Researcher Award - Honorable Mention</b> , Computing Research Association	2024
<b>Junior Phi Beta Kappa</b> , 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 (\$1,200)**, National Science Foundation 2023

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

**NSF Research Experiences for Undergraduates Inter (\$7,650)**, University of Southern California 2023

**Distributed Research Experiences for Undergraduates Intern (\$7,000)**, Computing Research Association 2022

*Awarded to conduct research at the Rice University Vision, Language and Learning Lab with Professor Vicente Ordóñez-Román.*

**Critical Language Scholarship Alternate**, U.S. Department of State 2022

*Eligible for fully funded program to study Mandarin Chinese abroad, in case of finalists declining their awards.*

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

## Research Experience

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**Blablablab, University of Michigan** Ann Arbor, MI

*Graduate Student Research Assistant (Advisor: Professor David Jurgens)*

*August 2024 – Present*

Assemble corpora of written and spoken code-switched language from Wikipedia and publicly available podcasts, to enable study of sociolinguistic factors in code-switching, using data processing pipeline integrating SQL database, Whisper ASR model, and language identification. Design experiments to evaluate large language models' ability to perform code-switched reasoning, implemented using OpenAI API and vLLM.

**Speech Lab, Columbia University** New York, NY

*Research Assistant (Advisor: Professor Julia Hirschberg)*

*January 2022 – May 2024*

Investigated 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** Los Angeles, CA

*REU Intern (Advisor: Professor Jonathan Gratch)*

*May 2023 – August 2023*

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** Houston, TX

*Visiting Student Researcher (Advisor: Professor Vicente Ordóñez-Román)*

*May 2022 – July 2022*

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.

**Columbia Daily Spectator** New York, NY

*Data Journalist*

*October 2021 – May 2022*

Reported stories incorporating data analysis and visualization using Python, Adobe Illustrator, HTML, and CSS. Recruited and trained reporters in data journalism. Communicated data analysis methods to non-technical editors. [\[Articles & graphics\]](#) [\[More articles & graphics\]](#)

**Natural Language Text Processing Lab, Columbia University** New York, NY

*Data Annotator (Supervisor: Fei-Tzin Lee)*

*October 2021 – December 2021*

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

**Cortez Lab, Columbia University** New York, NY

*Research Assistant (Advisor: Katherine Moore)*

*March 2021 – June 2021*

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.

## Invited Talks and Panels

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“Advancing Technologies for a Multilingual World at the Michigan Artificial Intelligence Lab.” Talk for Building Bridges in CSE PhD Studies Program. Florida International University, Miami, FL, 18 November 2024.

"RASwDA: Re-Aligned Switchboard Dialog Act Corpus for Dialog Act Prediction in Conversations." Talk for Professor Julia Hirschberg's course COMS 6998: Advanced Topics in Spoken Language Processing. Columbia University, New York, NY, 5 March 2024. [[Paper](#)] [[Slides](#)]

## Teaching Experience

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### **Columbia COMS3771: Machine Learning**

*Course Assistant*

New York, NY

January 2024 - May 2024

### **Columbia LING4903: Syntax**

*Teaching Assistant*

New York, NY

September 2023 - December 2023

### **Columbia COMS3251: Computational Linear Algebra**

*Course Assistant*

New York, NY

September 2022 - December 2022

### **Columbia COMS1404: Emerging Scholars Program Seminar**

*Workshop Assistant*

New York, NY

September 2021 - May 2022

### **Columbia SCNC1000: Frontiers of Science**

*Frontiers of Science Ambassador*

Virtual

September 2020 - December 2020

## Advising and Mentoring

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**Yusheng Zhou**, B.S.E., Data Science, College of Engineering (Expected May 2026)

*Blablablab Research Mentoring*

University of Michigan

September 2025 - Present

Working toward co-authored ACL Rolling Review submission

**Kevin Chou**, B.S.E., Computer Engineering, College of Engineering (Expected May 2028)

*Taiwanese American Student Association Big/Little Mentorship Program*

University of Michigan

October 2024 - April 2025

Holistic Mentorship Program

**Justine Choi**, B.A., Linguistics and Anthropology, Columbia College (Expected May 2027)

*Café con Ling (Linguistics Mentorship Program)*

Columbia University

February 2025 - March 2025

Holistic Mentorship Program

**Max Bauer**, B.A., Classics and Linguistics, Columbia College (Expected May 2026)

*Odyssey Mentoring Program*

Columbia University

October 2024 - December 2024

Holistic Mentorship Program

**Alexandra Jelihovschi**, B.A., Computer Science, Columbia College (Expected May 2027)

*Application Development Initiative Computer Science Mentorship Program*

Columbia University

October 2023 - December 2023

Holistic Mentorship Program

**Yookyeong Oh**, Coursework toward B.A. (2022 - 2023), School of General Studies

*Women in Computer Science Mentorship Program (Holistic Mentorship)*

Columbia University

February 2023 - April 2023

Next Master of Science in Management at Stanford University Graduate School of Business

**Inna Yuan**, B.A., C. S.-Math and Linguistics, Columbia College (May 2025)

*Application Development Initiative Computer Science Mentorship Program*

Columbia University

October 2022 - December 2022

Holistic Mentorship Program

## Leadership and Service

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### *Mentoring*

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#### **NSF-GRFP Peer Mentor Network**

*Mentor*

Ann Arbor, MI

September 2025 – Present

Provide application feedback and participate in outreach events to current University of Michigan students applying to the National Science Foundation's Graduate Research Fellowship Program.

#### **Café con Ling**

*Mentor*

Virtual

December 2024 – Present

Mentor current undergraduates in the Columbia University Linguistics Program through peer mentoring program which provides by-appointment office hours.

### *Science Outreach and Communication*

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#### **University of Michigan Artificial Intelligence Laboratory**

*AI Blog Editor*

Ann Arbor, MI

August 2025 – Present

Create, edit, and proofread the Michigan AI blog, and encourage blog contributions from graduate students in the Michigan AI Lab. [[Blog](#)]

#### **Engaging Scientists in Policy and Advocacy**

*Secretary and Social Media Coordinator*

Ann Arbor, MI

July 2025 – Present

Keep accurate records to ensure continuity of ESPA's institutional memory, so that we can also continuously improve our initiatives. Ensure timely communication of relevant opportunities to members. Increase ESPA's public visibility, furthering our mission of fostering publicly engaged science and science communication. Foster useful collaborations and connections between ESPA and aligned organizations/individuals via social media.

#### **University of Michigan Computer Science and Engineering Division**

*Building Bridges in CSE PhD Studies Volunteer*

Ann Arbor, MI

October 2024 – November 2024

Conducted outreach to underrepresented undergraduates by delivering talk introducing my research and the U-M CSE graduate program at Florida International University. Hosted one-on-one coffee chats with prospective computer science graduate school applicants.

### *Student Organizations*

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#### **The Michigan Daily**

*Correspondent*

Ann Arbor, MI

May 2025 – July 2025

Authored two ~2000-word ledes and one ~1600-word secondary article for *The Statement*, the long-form magazine of *The Michigan Daily*. Conducted background research, interviewed sources, drafted articles, performed photography, and coordinated with editors. [[Articles](#)]

#### **University of Michigan Graduate Society of Women Engineers**

*Outreach Volunteer*

Ann Arbor, MI

August 2024 – Present

Served on graduate school information panel sharing insights with undergraduates on applying to graduate school, finding undergraduate research opportunities, and developing mentoring relationships. Conducted K-12 outreach with Community Action Network by volunteering for museum visit serving children from under-resourced families in Washtenaw County.

#### **University of Michigan Computer Science and Engineering Graduate Students**

*Member*

Ann Arbor, MI

August 2024 – Present

Advised computer science PhD applicant by providing detailed feedback on application materials, as well as general advice about the application process, through the Student Application Support Program. Hosted Tea Time social hour to build community among graduate students.

#### **Michigan Taiwanese Student Association**

Ann Arbor, MI



*Volunteer**August 2024 – Present*

Build community among Taiwanese graduate students at the University of Michigan by assisting operations at monthly social events.

**Columbia University Women in Computer Science**

New York, NY

*Academic Committee Co-Lead**August 2023 – May 2024*

Organized academic-related programming to support gender-diverse Columbia University computer science students, including workshops on course selection and lunches with female computer science professors. Hosted weekly coffee chats to provide students with advising on computer science internships, research, and courses.

**Columbia University Women in Computer Science**

New York, NY

*Community Committee Chair**August 2022 – May 2023*

Organized activities focused on building a gender-diverse community of Columbia University computer science students, including an information session introducing the technical interview process, as well as social activities such as arts and crafts nights.

*Additional Service to the University***University of Michigan Language Resource Center**

Ann Arbor, MI

*Language Bank Program Volunteer**November 2024 – Present*

Translate documents from English to Mandarin Chinese for University of Michigan departments/schools and external non-profit organizations.

**University of Michigan College of Engineering**

Ann Arbor, MI

*Common Reading Experience Book Selection Committee Volunteer**November 2024 – January 2025*

Reviewed 2 books to facilitate the process of selecting a book for the University of Michigan College of Engineering's Common Reading Experience, which aims to foster community, non-technical skills, and curiosity among engineering students. Provided feedback via surveys and group discussion.

**University of Michigan Computer Science and Engineering Division**

Ann Arbor, MI

*EECS 110: Discover Computer Science Interview Volunteer**September 2024 – November 2024*

Volunteered to be interviewed by a current student in EECS 110: Discover Computer Science, a course designed to introduce underrepresented students to computer science. Provided student interviewer with perspectives on potential CS career paths, graduate school, research, and internships.

**Skills**

- **Technical:** Python (vLLM, PyTorch, Hugging Face Transformers, scikit-learn, pandas, SciPy, NLTK), C, Java, R (car, dplyr, ggplot2, lme4), Git, LaTeX, Jupyter, Praat, Adobe Illustrator, Qualtrics, Figma, FFmpeg, Google Cloud MLOps
- **Languages:** Mandarin Chinese (ACTFL Reading/Listening/Speaking Rating: Advanced), German (Advanced; Gold Award on Level 1 National German Exam), Latin (Advanced; Gold Medal on Level 3/4 National Latin Exam)
- **Leadership/Service:** cross-cultural communication, interviewing sources, pitching, news/creative writing, translation