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
Relevant Coursework: Machine Learning, Natural Language Processing, Artificial Intelligence

Publications

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.* Association for Computing Machinery, New York, NY, USA, 545–550. `https://doi.org/10.1145/3565287.3617637`.

Presentations

Columbia University Undergraduate Research Symposium, New York, NY, October 2022. **Lin, E.**, Yang, Z., & Ordóñez, V. "Text-Based Prediction of Visual Complexity: How Does What We See Influence What We Say?" (poster).

Awards

REU Travel Grant, National Science Foundation   2023
Awarded $1200 to attend and orally present first-authored paper at MobiHoc '23 conference

Dean's List, Columbia College   2020 – 2023

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

Fulbright-Hays Scholarship (Declined), American Councils for International Education   2023
Awarded $7915 to cover cost of attendance for Taiwan Intensive Summer Language Program

Distributed Research Experiences for Undergraduates Intern, Computing Research Association   2022
Awarded $7000 to conduct research at Rice University 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

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   May 2023 – August 2023
REU Intern (Adviser: Professor Jonathan Gratch)   *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.

Vision, Language, and Learning Lab, Rice University   May 2022 – July 2022
Visiting Student Researcher (Adviser: Professor Vicente Ordóñez Román)   *Houston, TX*

Quantified visual and linguistic complexity in MSCOCO image captioning dataset by creating and applying novel visual complexity metric, then fine-tuning BERT to predict visual complexity from image captions. Probed and mitigated content-related biases in resulting models.

Natural Language Text Processing Lab, Columbia University   October 2021 – December 2021
Data Annotator (Superviser: Fei-Tzin Lee)   *New York, NY*

Generated semantic annotations for text generation/summarization in the literary domain.

Corter Lab, Columbia University   March 2021 – June 2021
Research Assistant (Adviser: Katherine Moore)   *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   September 2023 – December 2023
Teaching Assistant   *New York, NY*

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

Columbia COMS3251: Computational Linear Algebra   September 2022 – December 2022
Course Assistant   *New York, NY*

Introduction to linear algebra and its applications to data analysis. Hosted weekly office hours, moderated class discussion board, graded homework assignments, proctored final exam.

Columbia COMS1404: Emerging Scholars Program Seminar   September 2021 – May 2022
Workshop Assistant   *New York, NY*

Facilitated introductory computer science seminar to increase retention of diverse undergraduates. Moderated discussions, took attendance, and emailed weekly announcements.

Work Experience

Columbia Daily Spectator   October 2021 – May 2022
Data Journalist   *New York, NY*

Reported stories incorporating data analysis and visualization using Python, Adobe Illustrator, HTML, CSS, including article on students' online attitudes around mental health, featuring social media data analysis.

Skills

Technical: Python (PyTorch, Keras, Hugging Face Transformers, scikit-learn), C, Java, Git, LaTeX, Praat, FFmpeg
Languages: Advanced Mandarin Chinese, advanced German, advanced Latin