Alejandro Ciuba

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Education

University of Pittsburgh   August 2023 – Present
Ph.D. in Computer Science   Pittsburgh, PA
- **Research:** Community-focused natural-language processing   GPA: 3.91
- **Advisors:** Aakash Gautam and Lorraine (Xiang) Li

University of Pittsburgh   August 2019 – May 2023
B.S. in Computer Science   Pittsburgh, PA
Minors in Linguistics and Spanish   GPA: 3.97

Research Experience

Human-Computer Interaction Research: Low-Resource Language Preservation   January 2024 – Present
Graduate Student Researcher under Dr. Aakash Gautam   Pittsburgh, PA
- Developing a literature analysis of NLP community engagement practices using the PRISMA framework
- Conducting interviews and thematic analysis to better understand how technology can benefit communities

Thematic Analysis of User Survey Responses on Social Media Bans   October 2024 – June 2025
Graduate Student Researcher under Dr. Aakash Gautam   Pittsburgh, PA
- Conducted a thematic analysis of survey responses regarding social media in Nepal
- Synthesized response views into themes to discuss social media policies

Natural Language Processing Research: Automatic Essay Evaluation   May 2024 – November 2024
Graduate Student Researcher under Dr. Lorraine (Xiang) Li   Pittsburgh, PA
- Performing baseline training/fine-tuning on a custom BERT-based model via PyTorch and HuggingFace
- Conducting exploratory data analysis on essay corpora via feature correlation and hypothesis testing

ASR Transcription Research & Technical Support   August 2022 – August 2024
Research Assistant under Dr. Dan Villarreal   Pittsburgh, PA
- Developed custom ASR pipeline with PyTorch Lightning and `pyannote` to automatically segment audio
- Developed a Python API to work with ELAN files with `pytest` integration

Classroom Discussion Analysis Research   January 2023 – April 2023
Research Assistant under Dr. Diane Litman   Pittsburgh, PA
- Managed dataset cleaning pipeline for Word Documents, focusing on anonymization and XML tag extraction
- Examined teacher-student classroom discussion differences through data analysis and hypothesis testing

Frederick Jelinek Memorial Summer Workshop   June 2022 – August 2022
Undergraduate Researcher under Drs. Anthony Larcher and Santosh Kesiraju   Baltimore, MD
- Created a trilingual corpus (English, French and Tamasheq/Tamahaq) for low-resource machine translation
- Ran low-resource model training simulations (e.g. for T5-Small and mBART)

Linguistics Research   January 2022 – April 2022
Undergraduate Research Assistant under Drs. Alan Juffs and Na-Rae Han   Pittsburgh, PA
- Parsed video game scripts for pragmatics analysis using `spaCy`, `nltk` and `beautifulsoup`
- Aided in the cleaning of the unpublished PELIC Speech Dataset

Work Experience

UR2PhD Mentorship Training   September 2025 – December 2025
Undergraduate researcher mentorship course through the Computing Research Association   Pittsburgh, PA
- Mentors an undergraduate student one-on-one research with the goal of publishing
- Guides the student through the research process, including data analysis, literature review, and paper writing
- Scaffolds tasks for the student to facilitate their learning experience
- Engages with the student via weekly meetings to discuss progress and develop tasks to complete together

NOUR Mentor   May 2025 – August 2025
Undergraduate researcher mentor   Pittsburgh, PA
- Guided undergraduate students in their first research experience
- Conducted lessons on research know-how (e.g., citation management, data analysis, problem discovery).
- Helped students present their findings in a final poster presentation at the end of the course.

Teaching Assistant Positions   August 2021 – Present
Computational Linguistics and Data Structures & Algorithms   Pittsburgh, PA
- Ran lab sessions for students, covering fundamental algorithm concepts
- Hosted office hours for students learning computational linguistic and natural-language processing concepts
- Conducts lab session for students, covering web design fundamentals
- Hosts office hours sessions to work one-on-one with students
- Scaffolds problems for students to develop their problem-solving skills

Carnegie Library ESL Class   August 2019 – March 2020
Volunteer ESL Instructor for the Carnegie Public Library   Pittsburgh, PA
- Guided adult learners through vocabulary and grammar exercises
- Maintained a safe environment for English learners

Publications

CSCW 2025
1. Prerana Khatiwada, **Alejandro Ciuba**, Aditya Nayak, Aakash Gautam, and Matthew Louis Mauriello. "Regulating Social Media: Surveying the Impact of Nepali Government's TikTok Ban". In: *Proc. ACM Hum.-Comput. Interact.* 9.7 (Oct. 2025), CSCW467:1–CSCW467:33. DOI: 10.1145/3757648. URL: https://dl.acm.org/doi/10.1145/3757648

AAAI iRaise Workshop
2. Zhaoyi Hou, **Alejandro Ciuba**, and Xiang Li. "Improving LLM-based Automatic Essay Scoring with Linguistic Features". In: *Proceedings of the Innovation and Responsibility in AI-Supported Education Workshop*. Ed. by Zichao Wang, Simon Woodhead, Muktha Ananda, Debshila Basu Mallick, James Sharpnack, and Jill Burstein. Vol. 273. Proceedings of Machine Learning Research. PMLR, Mar. 2025, pp. 41–65. URL: https://proceedings.mlr.press/v273/hou25a.html

INTERSPEECH 2023
3. Santosh Kesiraju, Marek Sarvaš, Tomáš Pavlíček, Cécile Macaire, and **Alejandro Ciuba**. "Strategies for Improving Low Resource Speech to Text Translation Relying on Pre-trained ASR Models". In: *INTERSPEECH 2023*. ISCA, Aug. 2023. DOI: 10.21437/interspeech.2023-2506

Horizons 2020 Project
4. Anthony Larcher, Yannick Estève, Mickael Rouvier, ... Cecile Macaire, **Alejandro Ciuba**, Peter Vickers, Luis Vicente, Victoria Mingote, and Pablo Gimeno. *Multi-Lingual Speech to Speech Translation for Under-Resourced Languages*. Tech. rep. Le Mans Université, Aug. 2022

Invited Presentations

Human-Computer Interaction + Natural-Language Processing   March 2025
Python Linguistics Club

Guest Lecture on Machine Translation   December 2023
Introduction to Computational Linguistics

Grants & Fellowships

Computing Research Association UR2PhD   September 2025 – Present
Amount: *$1,000 USD*

Southern Regional Educational Board Fellowship   August 2024 – Present
Amount: *$750 USD in travel funds for three years*

K. Leroy Irvis Fellowship   August 2023 – Present
Amount: *$30,000 USD*

Awards

CSC Hacks Winner + Best Beginner Project   November 2020
Submission: *Flatland: The Game*

Provost Academy Member   August 2019 – May 2023

Skills

Programming & Computation
- C, Python, R, Go, Java
- Git, GitHub and GitLab
- Compute cluster usage via Slurm
- Linux, Docker and bash script creation

User Research Skills
- Quantitative analysis via inferential statistics
- Qualitative analysis via coding and thematic analysis
- User interview and survey creation

Foreign Languages & Linguistics
- Conversational Spanish
- Basic Portuguese Comprehension
- Manual document translation experience