

Ankit Aich

📍 DMV, USA ✉ ankit.aich@nih.gov 📞 585-201-0659 🌐 ankitaich.com 🏠 Ankit Aich 🇺🇸 US Permanent Resident

🎓 Education

- 2024 – present
Philadelphia, USA
- Postdoctoral Fellow, The University of Pennsylvania**
- Research on computational social science and social relations.
 - Large Language Modeling and Cultural Analytics
 - Penn-NLP group with Lyle Ungar
- 2020 – 2024
Chicago, USA
- PhD in Computer Science, University of Illinois**
- Research in Computational Social Science, NLP in Healthcare & Applied AI
 - Dissertation - Towards Unifying Psycholinguistic Healthcare and NLP
 - Proposal - The Bridge between Clinical Psycholinguistics and Natural Language Processing
 - Qualifier - Understanding the Current State of Mental Health Research in Computer Science
- 2022
Chicago, USA
- MS in Computer Science, University of Illinois**
- MS Thesis - The Fortes and Fallacies of Misinformation Detection Systems
 - Courses - Statistical NLP, Deep Learning, Big Data Analysis
- 2018
Kolkata, India
- B.Tech in Information Technology, West Bengal Univ of Technology**
- Thesis - Prediction of Protein Interactions using Machine Learning
 - Courses - Discrete Math, Image Processing, Object Oriented Programming

📁 Professional Experience

- 2024 – present
Baltimore, USA
- Postdoctoral Trainee Fellow, The National Institutes of Health**
- Leading work on understanding drug use, opioid usage, and stigma in communities.
 - Developing work on LLMs and AI in drug abuse understanding
- 05/2023 – 08/2023
Cambridge, USA
- Amazon Alexa, Applied Scientist - II, Intern**
- Working on Deep Generative AI for Action Grounding.
 - Deploying massive language models for cross-lingual and multi-lingual task setups.
 - Working to make Alexa inclusive with support for many languages
- 01/2023 – 05/2023
Chicago, USA
- University of Illinois - Department of CS, Instructor of CS**
- Instructor for CS 421 Natural Language Processing.
 - Graduate course for Masters of Engineering students.
- 01/2020 – 01/2024
Chicago, USA
- University of Illinois - NLP Lab, Research Assistant**
- Research in Language variation across neurotypical and neurodivergent populations.
 - Research in Misinformation detection, generative modeling, and low resource languages.
 - Data Analysis and building SOTA datasets on Mental Healthcare, Fake News.
 - Running user studies with controlled settings for computational social science.
- 06/2022 – 08/2022
Chicago, USA
- University of Illinois - Graduate College, Graduate Teaching Consultant**
- Creation, deployment, and innovation of all course materials and training materials to train incoming teaching assistants.
 - Workshop creator and leader for grad TA orientation and mentoring.
- 01/2020 – 12/2021
Chicago, USA
- University of Illinois - Department of CS, Teaching Assistant**
- Teaching Asst. for Object-Oriented Software Design, Programming Language Design
 - 1-1 guidance for Maven, SQL, Swing, JavaFX, UX Design
- 06/2021 – 08/2021
Chicago
- University of Illinois - Department of CS, Course Builder**
- Created the CS-421 Intro to NLP Course.
 - Created assignments and tutorials for students
 - Redesigned projects and grading schema.
- 08/2018 – 08/2019
Rochester, USA
- Rochester Inst. Of Technology, Research Assistant Intern**
- Deployed an active learning framework with bayesian optimization on Gaussian Processes to model human hearts from EKG signals
 - Created feature extraction pipelines using PCA and Variational Autoencoders to viz latent spaces of clinical data
 - Created 3D to 1D DeepNets for modeling human irises to aid eye tracking beyond SIFT and SURF
- 03/2016 – 06/2016
India
- Unacademy, Educator Intern**
- Instructor for India's largest online education initiative.
 - Instructor for functional English grammar usage and understanding.
 - The course had 11000+ enrollments and a 4.8/5 rating.
- 03/2016
Kolkata, India
- Substitute Instructor of Computer Science, St. Thomas College of Engineering and Technology**
- Delivered lectures on Object-Oriented Programming in Java.
 - Lectures were delivered to sophomore undergraduates.

Peer Reviewed Publications

Towards Comprehensive Language Analysis for Clinically Enriched Spontaneous Dialogue

Baris Karacan, **Ankit Aich**, Avery Quynh, Amy Pinkham, Philip Harvey, Colin Depp, and Natalie Parde. In Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024). Turin, Italy, May 20-25, 2024.

Towards Intelligent Clinically-Informed Language Analyses of People with Bipolar Disorder and Schizophrenia

Ankit Aich, Avery Quynh, Varsha Badal, Amy Pinkham, Philip Harvey, Colin Depp, Natalie Parde. Findings of the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP 2022) in Abu Dhabi, UAE. December 7-11 2022.

Demystifying Neural Fake News via Linguistic Feature-Based Interpretation

Ankit Aich, Souvik Bhattacharya, and Natalie Parde. In Proceedings of the 29th International Conference on Computational Linguistics (COLING 2022). Gyeongju, Republic of Korea, October 12-17, 2022.

Are You Really Okay? A Transfer Learning-based Approach for Identification of Underlying Mental Illnesses

Ankit Aich and Natalie Parde. In the Proceedings of the 2022 Workshop on Computational Linguistics and Clinical Psychology (CLPsych 2022) in conjunction with the North American Chapter of the Association for Computational Linguistics (NAACL). Seattle, Washington, July 15, 2022.

Telling A Lie: Analyzing the Language of Information and Misinformation during Global Health Events

Ankit Aich and Natalie Parde. In the Proceedings of the 2022 Language Resources and Evaluation Conference (LREC 2022). Marseille, France, June 20-25, 2022.

TweetTaglish: A Dataset for Investigating Tagalog-English Code-Switching

Megan Herrera, **Ankit Aich**, and Natalie Parde. In the Proceedings of the 2022 Language Resources and Evaluation Conference (LREC 2022). Marseille, France, June 20-25, 2022.

A Scaled Conjugate Gradient Back-propagation Algorithm for Keyword Extraction

Ankit Aich, Amit Dutta, and Aruna Chakraborty. A Scaled Conjugate Gradient Backpropagation Algorithm for Keyword Extraction. In: Bhateja, V., Nguyen, B., Nguyen, N., Satapathy, S., Le, DN. (eds) Information Systems Design and Intelligent Applications. Advances in Intelligent Systems and Computing, vol 672. Springer, Singapore. https://doi.org/10.1007/978-981-10-7512-4_67

A Crawler-Parser based Approach to Newspaper Scraping and Reverse Searching of Articles

Ankit Aich, Amit Dutta, and Aruna Chakraborty. A Crawler-Parser-Based Approach to Newspaper Scraping and Reverse Searching of Desired Articles. In: Satapathy, S., Tavares, J., Bhateja, V., Mohanty, J. (eds) Information and Decision Sciences. Advances in Intelligent Systems and Computing, vol 701. Springer, Singapore. https://doi.org/10.1007/978-981-10-7563-6_15

Other Publications (Peer Reviewed Abstracts - Posters - Non-PR Articles)

The State of Modern LLMs for Substance Use Help - Extended Abstract

Ankit Aich, Salvatore Giorgi, Kelsey Jane Isman, Tingting Liu, Zachary Fried, João Sedoc, Brenda Curtis. The International Conference on Computational Social Science, Philadelphia, PA 2024

Publications in Review

Applying LLMs for Clinical Data Collection of People with Bipolar Disorder and Schizophrenia

Ankit Aich, Avery Quynh, Pamela Osseyi, Amy Pinkham, Philip D Harvey, Brenda Curtis, Colin Depp, Natalie Parde.

Vernacular? I Barely Know Her: Challenges with Style Control and Stereotyping

Ankit Aich, Tingting Liu, Sal Giorgi, Kelsey Isman, Lyle Ungar, Brenda Curtis

Explicit and Implicit Large Language Model Personas Generate Opinions but Fail to Replicate Deeper Perceptions and Biases

Sal Giorgi, Tingting Liu, **Ankit Aich**, Kelsey Isman, Garrick Sherman, Zachary Fried, Joao Sedoc, Lyle Ungar, Brenda Curtis

Awards Won

2022	Graduate Student Council Travel Award, University of Illinois Chicago <ul style="list-style-type: none">• Awarded travel research grant
2021	Research Grant - Social Cognition and Suicide in Psychotic Disorders, National Institute of Mental Health <ul style="list-style-type: none">• Grant of USD 160,142• Awarded for research on building the first multi-modal mental health clinical dataset.• Principal site RA with Natalie Parde (site PI), Colin Depp, Amy Pinkham, and Philip Harvey.• With UCSD, UMiami, UTDallas, and UIC.
2018	Undergraduate Research Grant, West Bengal Univ of Technology <ul style="list-style-type: none">• Research Grant of INR 10000 for outstanding research in UX and UI
2017	Undergraduate Research Grant, West Bengal Univ of Technology <ul style="list-style-type: none">• Research Grant of INR 10000 for outstanding research in applied machine learning

Awards Nominated

2022 Chicago, USA	Laurette Kirsteinn Award For International Grad Students <ul style="list-style-type: none">• Department nominated for award towards international graduate student research and funding
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2021
Chicago, USA

Provost's Award for Graduate Research
• Nominated award for exceptional research at the doctoral level

Invited Talks

- 2022 **Walking towards Clinically Grounded Real NLP Systems**, *Reveal Brainspace, Chicago*
- 2022 **What's my Homework? Best Practices to develop and maintain for being an effective TA**, *Graduate College, UIC*
- 2021 **How to be an Effective Graduate Teaching Assistant**, *Graduate College UIC*
- 2021 **How to Choose a Research Area in your PhD**, *UIC PhD Graduate College*

Organizations

- 2021 - present **Association for Computational Linguistics**, *Reviewer, Track Committee Member*
- ARR 2024
 - IC2S2 2024
 - EACL 2021
 - EMNLP 2021, 2022, 2023
 - ACL 2023
 - Tracks served
 - Reality Check
 - Computational Social Science & Cultural Analytics
 - NLP Applications
 - Ethics in NLP
 - Natural Language Generation
 - Healthcare in AI & COVID 19
- 2020 - 2024 **Association for Computational Linguistics**, *Volunteer*
- Lead volunteer for EMNLP 2022
 - Volunteer for ACL 2020, ACL 2021, NAACL 2021, NAACL 2022
 - Technical support, on-site presentation support, helpdesk support
- 2024 - present **National Institutes of Health**
- Judge for Research Poster Day
- 2023 - 2024 **Computational Intelligence**, *Reviewer*
- Reviewer for Computational Intelligence
 - Areas of Computational Social Science, NLP
- 2021 - 2022 **Graduate Student Council**, *Primary Departmental Representative for CS*
- The primary representative for CS graduate school at UIC
 - Responsible for departmental student issues, departmental events, and student awards.
 - Voicing student concerns at the university administrative level.
- 2023 - 2024 **American Federation of Teachers**, *Member Organizer*
- Member organizer for UIC and AFT local 6297

Academic Advising

- 2021 - present **Research Advisor**
- Zachary Fried, Postbac Fellow @NIDA
 - Pamela Osseyi, Postbac Fellow @NIDA
 - Dahlia Earleywine, Postbac Fellow @NIDA
 - Kelsey Isman, Postbac Fellow @NIDA
 - Megan Herrera - Data Scientist @ Discover - previously BS @ UIC
 - Souvik Bhattacharya - PhD student @ UIC - previously MS student @ UIC
 - Nimeesa Chan - Current Ph.D. student @ Johns Hopkins previously BS @ UIC
 - Nandini Jirobe - Current BS student at UIC
 - Daniyal Siddiqui - Current BS student at UIC

Languages

English	● ● ● ● ●	Bengali	● ● ● ● ●
Hindi	● ● ● ● ●	Spanish	● ● ● ● ●
German	● ● ● ● ●		

Professional Certifications

- Data Analysis and Visualization in R
- Ethical Hacking in Linux Frameworks

References

Brenda Curtis, *Unit Chief, Technology Translational Research Unit, National Institute on Drug Abuse*
brenda.curtis@nih.gov

Lyle Ungar, *Professor, University of Pennsylvania*
ungar@cis.upenn.edu

Natalie Parde, *Assistant Professor of Computer Science, University of Illinois Chicago, PhD Advisor*
parde@uic.edu

Colin A Depp, *Professor of Psychiatry, University of California, San Diego*
cdepp@health.ucsd.edu

Barbara Di Eugenio, *Professor of Computer Science, University of Illinois, Chicago*
bdieugen@uic.edu

Declaration

(C) Ankit Aich - October 2023



Ankit Aich
USA, 05/2024