

Ankit Aich

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🎓 Education

01/2020 – present
Chicago, USA

PhD in Computer Science, University of Illinois

- Research in Applied Machine learning and Natural Language Processing.
- AI in Healthcare, Mental Healthcare, and Modelling
- Misinformation, Fake News, and Generative Modelling
- Low resource languages, and resource curation.

2020 – present
Chicago, USA

MS in Computer Science, University of Illinois

- Courses include NLP - Statistical NLP - Deep Learning, Statistical Machine learning
- Project in neural misinformation detection and generative modeling

2014 – 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

01/2023 – present
Chicago, United States

Instructor of Computer Science, University of Illinois - Department of CS

- Instructor for CS 421 Natural Language Processing.
- Graduate course for MEng students.

01/2020 – present
Chicago, USA

Research Assistant, University of Illinois - NLP Lab

- 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

Graduate Teaching Consultant, The University of Illinois

- 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

Teaching Assistant, University of Illinois - Department of CS

- 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

Course Builder, University of Illinois - Department of CS

- 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

Research Assistant, Rochester Inst. Of Technology

- 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

Educator, Unacademy

- 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.

04/2014 – 08/2018
Kolkata, India

Instructor of Science and English, Tutoring Centre

- Instructor of general science at the middle school level - grades 5-8.
- Instructor of English literature and grammar at high school level - grades 9-12.

📄 Publications

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

Ankit Aich, Avery Qunyh, 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. To appear in the 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

Skills

Python, Java, Frontend (HTML | CSS), R, Tensorflow, Torch, Hugging Face, Git, Shell, MATLAB, Data Visualization , SQL, User Studies, C, C++, UI Design, Tkinter, JavaFX, Swing

Awards

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| 2022 | Graduate Student Council Travel Award , <i>University of Illinois Chicago</i> <ul style="list-style-type: none">• Awarded travel research grant |
| 2021 | Research Grant - Social Cognition and Suicide in Psychotic Disorders , <i>National Institute of Mental Health</i> <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 , <i>West Bengal Univ of Technology</i> <ul style="list-style-type: none">• Research Grant of INR 10000 for outstanding research in UX and UI |
| 2017 | Undergraduate Research Grant , <i>West Bengal Univ of Technology</i> <ul style="list-style-type: none">• Research Grant of INR 10000 for outstanding research in applied machine learning |

Invited Talks

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

Organizations

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| 2021 - present | Association for Computational Linguistics , <i>Reviewer, Track Committee Member</i> <ul style="list-style-type: none">• EACL 2021• EMNLP 2021, 2022• Tracks served<ul style="list-style-type: none">- Computational Social Science & Cultural Analytics- NLP Applications- Ethics in NLP- Natural Language Generation- Healthcare in AI & COVID 19 |
| 2020 - present | Association for Computational Linguistics , <i>Volunteer</i> <ul style="list-style-type: none">• Lead volunteer for EMNLP 2022• Volunteer for ACL 2020, ACL 2021, NAACL 2021, NAACL 2022• Technical support, on-site presentation support, helpdesk support |
| 2021 - 2022 | Graduate Student Council , <i>Primary Departmental Representative for CS</i> <ul style="list-style-type: none">• 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. |

Languages

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

Certificates

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

Academic Service at Graduate Level

2021 - present

Research Advisor, *List names all students I have advised as a research mentor*

- Megan Herrera - Ex intern at Discover - current UIC senior
- Souvik Bhattacharya - Current MS student at UIC
- Nimeesa Chan - Current Ph.D. student at Johns Hopkins
- Nandini Jirobe - Current BS student at UIC
- Daniyal Siddiqui - Current BS student at UIC