

# Anubrata Das

[anubrata.github.io](https://anubrata.github.io) • [anubrata\[at\]utexas.edu](mailto:anubrata[at]utexas.edu)  
1616 Guadalupe Street, STE - 5.202 • Austin, TX, USA, 78701

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## Education

- **University of Texas at Austin** **Austin, Texas**  
*Ph.D. Student, School of Information* 08/2018 – Present
    - Committee: Dr. Matt Lease (*Chair*), Dr. Min Kyung Lee, Dr. Ken Fleischmann
    - Research: Developing Human-AI partnership for Curbing Misinformation Online: An Explainable Natural Language Processing Approach
    - GPA: **3.97/4.00** (Coursework)
    - **Graduate Courses:** Natural Language Processing, Research in Computational Linguistics, Information Retrieval, Machine Learning, Human-AI Interaction, Supervised Teaching in Information Science
  - **Indian Institute of Engineering Science and Technology Shibpur** **Kolkata, India**  
*Bachelor of Engineering, Department of Computer Science and Technology* 07/2011 – 06/2015
    - GPA: **8.43/10.00**
    - First Class with Honors
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## Research Experience

- **University of Texas at Austin** **Austin, Texas**  
*Research Assistant, [Information Retrieval and Crowdsourcing Lab](#)* 08/2018 – Present
    - Advisor: Dr. Matthew Lease
    - Research Areas: *Explainable NLP, Crowdsourcing, Human-AI Interaction, Content Moderation, Automated Fact-Checking*
  - **Max Planck Institute of Informatics** **Saarbrücken, Germany**  
*Research Intern, Databases and Information Systems Group* 06/2019 – 08/2019
    - Advisor: Prof. Dr. Gerhard Weikum
    - Project: *Systematic discovery of bias: A case study on Airbnb Listings*
  - **Indian Institute of Management Calcutta** **Kolkata, India**  
*Research Intern, Management Information Systems Group* 10/2012 – 09/2015
    - Advisor: Dr. Somprakash Bandyopadhyay
    - Project: *Interactive crowdsourcing on social media for micro-level need assessment using for disaster management*
  - **Indian Institute of Technology Kharagpur** **West Bengal, India**  
*Research Intern, Complex Networks and Research Group* 05/2013 – 07/2013
    - Advisor: Dr. Saptarshi Ghosh
    - Project: *Prediction of Twitter trends using Machine Learning and Data Mining Techniques*
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## Publications [\[Google Scholar\]](#)

\* denotes equal contribution

### Peer Reviewed Conference - Long Papers

- Das, A.\***, Gupta, C.\*, Kovatchev, V., Lease, M., & Jessy Li, J. (2022, May) *ProtoTEx: Explaining Model Decisions with Prototype Tensors*. In Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (ACL).
- Gupta, S., Singh, G., **Das, A.**, & Lease, M. (2021, July). *Pareto Solutions vs Dataset Optima: Concepts and Methods for Optimizing Competing Objectives with Constraints in Retrieval*. In Proceedings of the 2021 ACM SIGIR International Conference on Theory of Information Retrieval (pp. 43-52). (**51%** acceptance rate)

**Das, A.,** Dang, B., & Lease, M. (2020, October). *Fast, Accurate, and Healthier: Interactive Blurring Helps Moderators Reduce Exposure to Harmful Content*. In Proceedings of the AAAI Conference on Human Computation and Crowdsourcing (Vol. 8, No. 1, pp. 33-42). (27% acceptance rate)

**Das, A.,** Anjum, S., & Gurari, D. (2019). *Dataset bias: A case study for visual question answering*. Proceedings of the Association for Information Science and Technology, 56(1), 58-67.

#### Peer Reviewed Conference - Short Papers

Shi, L., Bhattacharya, N., **Das, A.,** Lease, M., & Gwizdka, J. *The Effects of Interactive AI Design on User Behavior: An Eye-tracking Study of Fact-checking COVID-19 Claims*. In Proceedings of the 7th ACM SIGIR Conference on Human Information, Interaction and Retrieval (CHIIR), 2022.

#### Journal Articles

Ekstrand, M. D., **Das, A.,** Burke, R., & Diaz, F. *Fairness and Discrimination in Information Access Systems*. Foundations and Trends in Information Retrieval ([arxiv preprint](#)) (2021) (100 pages). (SJR Score 0.73)

#### Book Chapters

Ekstrand, M. D., **Das, A.,** Burke, R., & Diaz, F. *Fairness in Recommendation*. Recommender Systems Handbook (2021) (40 pages). DOI: [https://doi.org/10.1007/978-1-0716-2197-4\\_18](https://doi.org/10.1007/978-1-0716-2197-4_18)

#### Peer Reviewed Workshops

**Das, A.,** Mehta, K., & Lease, M. (2019). *CobWeb: A Research Prototype for Exploring User Bias in Political Fact-Checking*. In ACM SIGIR Workshop on Fairness, Accountability, Confidentiality, Transparency, and Safety in Information Retrieval (FACTS-IR), 2019. (8 pages)

#### Preprints / Informal Publications

Singh, P., **Das, A.,** Jessy Li, J., & Lease, M. (2021, September). *The Case for Claim Difficulty Assessment in Automatic Fact Checking* (8 pages).

**Das, A.,** Lee, S., Nguyen, T. A., Kharosekar, A., Krishnan, S., Krishnan, S., Tate, E., Wallace, B. C., & Lease, M. *ExFacto: An Explainable Fact-Checking Tool*. In Knight Research Network Tool Demonstration Day, 2021. Presentation abstract.

**Das, A.,** & Lease, M. (2019). *A Conceptual Framework for Evaluating Fairness in Search*. (4 pages) arXiv:1907.09328.

#### Undergraduate Work

**Das, A.,** Mallik, N., Bandyopadhyay, S., Bit, S. D., & Basak, J. (2016, March). *Interactive information crowdsourcing for disaster management using SMS and Twitter: A research prototype*. In 2016 IEEE International Conference on Pervasive Computing and Communication Workshops (PerCom Workshops) (pp. 1-6). IEEE.

**Das, A.,** Roy, M., Dutta, S., Ghosh, S., & Das, A. K. (2014, December). *Predicting trends in the twitter social network: A machine learning approach*. In International Conference on Swarm, Evolutionary, and Memetic Computing (pp. 570-581). Springer, Cham.

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## Funding

- **Graduate School Fellowship** 08/2018 – 05/2019
  - Awarded by the Graduate School, University of Texas at Austin
- **UT Good Systems Grand Challenge** - Graduate Student Grant Proposal. **Anubrata Das**, Chenyan Jia, Shivam Garg. Supervisor: Dr. Min Kyung Lee. *Designing algorithmic nudge to reduce inadvertent COVID-19 misinformation sharing on social media*. Awarded - \$7000.

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## Presentations

### Invited Talks

#### **ProtoTEx: Explaining Model Decisions with Prototype Tensors**

- Amazon Science Clarify Team, 05/17/2022
- NEC Laboratories Europe, 06/09/2022

## Commercial Content Moderation and Psychological Well-Being

- TxHCI - A seminar organized by HCI Researchers across Universities in Texas, 10/02/2020
- Amazon AWS Science, 10/14/2020
- Amazon Human-in-the-loop (HILL) services team, 10/23/2020
- ACM SIGCHI Mumbai Chapter, 26th Meet, 08/28/2021

## Oral Presentations

- Das, A.** You are what you tweet: Profiling users by past tweets to improve hate speech detection. iConference. March 2022.
- Das, A.** ProtoTex: Explaining Model Decisions with Prototype Layers. Research Colloquium, School of Information, University of Texas at Austin. November 2021. Lightning Talk.
- Das, A.** ProtoBART: Explaining Model Decisions with Prototype Layers. TACCSTER: TACC Symposium for Texas Researchers. September 2021. Lightning Talk.
- Das, A.** Fast, Accurate, and Healthier: Interactive Blurring Helps Moderators Reduce Exposure to Harmful Content. AAAI HCOMP 2020. Virtual Conference.
- Das, A.** CobWeb: A Research Prototype for Exploring User Bias in Political Fact-Checking. ACM SIGIR Workshop on Fairness, Accountability, Confidentiality, Transparency, and Safety in Information Retrieval (FACTS-IR), 2019. Paris, France.
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## Awards and Honors

- Student Profession Development Award for Attending ACL 2022. Award Amount \$1000. 04/2022
  - Annual Diversity & Inclusion Best Student paper award 05/2019
    - Dataset Bias: Predicting and Understanding Implications for Visual Question Answering
    - Awarded by the School of Information, University of Texas at Austin
  - Spot Award - [Mu Sigma Inc.](#) 2016
    - Awarded by the Innovation and Development Team
    - Interactive visualization for Stock Market as a network
  - Class of 1990 Award: Excellence in Leadership 02/2014
    - Awarded by the Global Alumni Association of BESU (now [IIEST](#))
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## Teaching and Mentoring

- Teaching Assistant *Fall 2020*
    - INF385T.3 / CS395T: Human Computation and Crowdsourcing by Dr. Matt Lease
    - Three 60-minutes Tutorials on Amazon Sagemaker Ground Truth for collecting data annotations
  - Co-Supervising undergraduate research group with Dr. Matt Lease *06/2020 - Present*
    - A group of ten students
    - Working on fact-checking using NLP and Human-computation methods
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## Service

- Reviewer and Program Committee
  - ACL Rolling Review 2022
  - AAAI AIES 2022
  - CHI 2021, 2022
  - CSCW 2021, 2022
  - The Web Conference 2021
  - Annual Meeting of the Association for Information Science and Technology: 2019, 2020
  - Journal: Information Processing and Management

- Committee
    - Assistant Professor Hiring Committee 2020-2021
    - Doctoral Studies Committee, School of Information, 2019-2020
  - Student Volunteer
    - ACL 2022
    - CSCW 2019
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## Industry Experience

- **Microsoft** **Hyderabad, India**  
*Software Engineer* *04/2018 – 07/2018*
    - Build, debug and maintain a marketing management tool for Microsoft Universal Store
  - **Microsoft** **Hyderabad, India**  
*Associate Consultant* *11/2016 – 04/2018*
    - Develop solutions for enterprise search for a Fortune 500 oil and gas corporation
  - **Mu Sigma** **Bangalore, India**  
*Decision Scientist* *08/2015 – 10/2016*
    - Design and build research prototypes for algorithmic trading using machine learning
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## Skills

**Research Methodologies:** Experimental Design, User Study, Crowdsourcing, Natural Language Processing, Machine Learning, Inferential Statistics

**Programming Languages:** Python, R, JavaScript, SQL

**Technologies:** Flask, Pytorch, Scikit-Learn, NLTK, SciPy, NumPy, Git

**Survey Tools:** Qualtrics

**Crowdsourcing:** [Amazon Mechanical Turk](#), [AWS Sagemaker Ground Truth](#), [AWS Augmented AI](#)

**Languages:** Fluent in English and Bengali, Knowledge of Hindi

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