

# Anubrata Das

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## Education

- **University of Texas at Austin** **Austin, Texas**  
*Ph.D. Candidate, School of Information* *08/2018 – Present*
    - Committee: Dr. Matt Lease (co-advisor), Dr. Junyi Jessy Li (co-advisor, Dept. of Linguistics), 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, [Artificial Intelligence and Human Centered Computing Lab](#)* *08/2018 – Present*
    - Advisor: Dr. Matthew Lease
    - Research Areas: *see above*
  - **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 [\[Google Scholar\]](#)

### Journal Articles

1. **Das, Anubrata**, Houjiang Liu, Venelin Kovatchev, and Matthew Lease. The state of human-centered nlp technology for fact-checking. *Information Processing & Management, Special Issue on Machine and Human Factors in Misinformation Management*, 2022. **Accepted.**, (Impact Factor: 6.222)
2. Michael D Ekstrand, **Das, Anubrata**, Robin Burke, and Fernando Diaz. Fairness in information access systems. *Foundations and Trends® in Information Retrieval*, 16(1-2):1–177, 2022 (**SJR Score 0.73**)

### Peer Reviewed Conference - Long Papers

1. **Das, Anubrata\***, Gupta, Chitrang\*, Venelin Kovatchev, Matthew Lease, and Junyi Jessy Li. ProtoTex: Explaining model decisions with prototype tensors. In *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, pages 2986–2997, Dublin, Ireland, May 2022. Association for Computational Linguistics. (\* denotes equal contribution)
2. Soumyajit Gupta, Gurpreet Singh, **Das, Anubrata**, and Matthew Lease. 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, ICTIR '21*, page 43–52, New York, NY, USA, 2021. Association for Computing Machinery
3. **Das, Anubrata**, Brandon Dang, and Matthew Lease. Fast, accurate, and healthier: Interactive blurring helps moderators reduce exposure to harmful content. In *Proceedings of the AAAI Conference on Human Computation and Crowdsourcing*, volume 8, pages 33–42, 2020
4. **Das, Anubrata**, Samreen Anjum, and Danna Gurari. Dataset bias: A case study for visual question answering. *Proceedings of the Association for Information Science and Technology*, 56(1):58–67, 2019. (Diversity and Inclusion **student best paper Award** by the School of Information, UT Austin)

#### Peer Reviewed Conference - Short Papers

1. Li Shi, Nilavra Bhattacharya, **Das, Anubrata**, and Jacek Gwizdka. True or false? cognitive load when reading covid-19 news headlines: an eye-tracking study. In *Proceedings of the 2023 Conference on Human Information Interaction and Retrieval*, pages 107–116, 2023
2. **Das, Anubrata**, Houjiang Liu, Venelin Kovatchev, and Matthew Lease. The need for human-centered design in fact-checking research. In *Information Processing & Management Conference*, 2022
3. Li Shi, Nilavra Bhattacharya, **Das, Anubrata**, Matt Lease, and Jacek Gwizdka. The effects of interactive ai design on user behavior: An eye-tracking study of fact-checking covid-19 claims. In *ACM SIGIR Conference on Human Information Interaction and Retrieval*, pages 315–320, 2022

#### Book Chapters

Michael D Ekstrand, **Das, Anubrata**, Robin Burke, and Fernando Diaz. Fairness in recommender systems. In *Recommender systems handbook*, pages 679–707. Springer, 2022

#### Peer Reviewed Workshops

**Das, Anubrata**, Kunjan Mehta, and Matthew Lease. 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) (8 Pages)*, 2019

#### Non Peer-reviewed Publications

1. Venelin Kovatchev, Trina Chatterjee, Venkata S Govindarajan, Jifan Chen, Eunsol Choi, Gabriella Chronis, **Das, Anubrata**, Katrin Erk, Matthew Lease, Junyi Jessy Li, et al. longhorns at dadc 2022: How many linguists does it take to fool a question answering model? a systematic approach to adversarial attacks. In *Proceedings of the First Workshop on Dynamic Adversarial Data Collection*, pages 41–52, 2022
2. Alexandra Olteanu, Jean Garcia-Gathright, Maarten de Rijke, Michael D Ekstrand, Adam Roegiest, ... **Das, Anubrata**, et al. Facts-ir: fairness, accountability, confidentiality, transparency, and safety in information retrieval. In *ACM SIGIR Forum*, volume 53, pages 20–43. ACM New York, NY, USA, 2021. (**Workshop Report**)

#### Preprints

1. Prakhar Singh, **Das, Anubrata**, Junyi Jessy Li, and Matthew Lease. The case for claim difficulty assessment in automatic fact checking. *arXiv preprint arXiv:2109.09689*, 2021
2. **Das, Anubrata** and Matthew Lease. A conceptual framework for evaluating fairness in search. *arXiv preprint arXiv:1907.09328*, 2019

#### Undergraduate Work

1. **Das, Anubrata**, Neeratyoy Mallik, Somprakash Bandyopadhyay, Sipra Das Bit, and Jayanta Basak. 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)*, pages 1–6. IEEE, 2016

2. **Das, Anubrata**, Moumita Roy, Soumi Dutta, Saptarshi Ghosh, and Asit Kumar Das. Predicting trends in the twitter social network: a machine learning approach. In *International Conference on Swarm, Evolutionary, and Memetic Computing*, pages 570–581. Springer, 2014
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## Funding

- Evaluating Example-based Explainable Models in Large Language Models. **Amazon AWS Cloud Credit for Research**. Funding period: 11/30/2022 - 11/30/2023. **26,000 USD** (AWS Service Credits only).
  - **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 - USD 7000.
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## Presentations

### Invited Talks

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

- Research Colloquium, UT Austin, iSchool, 09/20/2022
- [iSchools European Doctoral Seminar Series](#), 09/16/2022
- 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

### Conference Presentations

**Das, A.** ProtoTeX: Explaining Model Decisions with Prototype Tensors. ACL. May 2022. Dublin, Ireland.

**Das, A.** You are what you tweet: Profiling users by past tweets to improve hate speech detection. iConference. March 2022. Virtual Conference.

**Das, A.** Exfacto: An explainable fact-checking tool. Knight Research Network Tool Demonstration Day, 2021. Virtual Conference.

**Das, A.** Fast, Accurate, and Healthier: Interactive Blurring Helps Moderators Reduce Exposure to Harmful Content. AAAI HCOMP 2020. Virtual Conference.

**Das, A.** Dataset bias: A case study for visual question answering. ASIS&T 2019. Melbourne, Australia.

**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.

### Other Presentations

**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.

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## Awards and Honors

- Annual Diversity & Inclusion Best Student paper award 05/2019
    - Das et al., ASIS&T 2019 (see the publication section above)
    - 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

- Co-Supervising student research with Dr. Matt Lease 01/2022 - 06/2022
    - Undergraduate thesis on Active Learning with Natural Language Rationales
    - Featured in [UT Austin, College of Natural Sciences News](#)
  - 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 - 08/2021
    - A group of ten students
    - Working on fact-checking using NLP and Human-computation methods
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## Service

- Program Committees and Reviewing
    - BlackboxNLP Workshop 2022
    - ACL Rolling Review 2022, 2023
    - AAAI AIES 2022
    - CHI 2021, 2022
    - CSCW 2021, 2022, 2023
    - The Web Conference 2021
    - Annual Meeting of the Association for Information Science and Technology: 2019, 2020
    - Journal: Information Processing and Management
  - Conference Volunteer
    - ACL 2022
    - CSCW 2019
  - University Committees
    - Assistant Professor Hiring Committee 2020-2021
    - Doctoral Studies Committee, School of Information, 2019-2020
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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**  
*Decision Scientist*

**Bangalore, India**  
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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