# Anubrata Das

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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: Human-AI Interaction, Natural Language Processing, Research in Computational Linguistics, Information Retrieval, Machine Learning, 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

# **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

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

10/2012 - 09/2015

Research Intern, Management Information Systems Group

Research Intern, Databases and Information Systems Group

- 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

# **Publications** [Google Scholar]

Peer Reviewed Conference - Long Papers

- 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

### **Journal Articles**

Ekstrand, M. D., **Das**, **A.**, Burke, R., & Diaz, F. *Fairness and Discrimination in Information Access Systems*. Foundations and Trends in Information Retrieval (To Appear) (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 (To Appear) (2021) (40 pages).

## 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.**, Li, J. 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.

## **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.

### **Presentations**

### **Invited Talks**

# 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.** 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 InformationRetrieval (FACTS-IR), 2019. Paris, France.

#### **Awards and Honors**

• 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.

- 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)

# **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

## **Service**

- Reviewer
  - ACL Rolling Review 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
  - CSCW 2019

## **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

2016

• Mu Sigma
Decision Scientist

Bangalore, India
08/2015 – 10/2016

- Design and build research prototypes for algorithmic trading using machine learning

## **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 Mechnaical Turk, AWS Sagemaker Ground Truth, AWS Augmented AI

Languages: Fluent in English and Bengali, Knowledge of Hindi