

# Anjishnu Mukherjee

## PhD in Computer Science | George Mason University

🌐 iamshnoo.github.io @ amukher6@gmu.edu 🐙 github.com/iamshnoo 🎓 Google Scholar

### Research Interests

• NLP • LLMs • Human-centered AI • Multilinguality • Multimodality • Alignment • Society • Culture

I work on Responsible AI, specifically in the evaluation and mitigation of cultural biases within multimodal, multilingual applications with a focus on LLMs. I have published recently at EMNLP, NAACL, ECIR, WACV and AIES.

### Education

<b>Present</b> Aug 2022	<b>George Mason University</b> Ph.D. in Computer Science, GPA: 3.91/4 Advisors: <a href="#">Antonios Anastasopoulos</a> , <a href="#">Ziwei Zhu</a>	<b>Fairfax, USA</b>
<b>Dec 2025</b> Aug 2022	<b>George Mason University</b> M.S. in Computer Science, GPA: 3.91/4	<b>Fairfax, USA</b>
<b>Jun 2021</b> Jul 2017	<b>Indian Institute of Engineering Science and Technology (IIST)</b> Bachelor of Technology (First class) in Computer Science, CGPA: 9.63/10	<b>Kolkata, India</b>

### Experience

<b>Aug 2025</b> <b>May 2025</b>	<b>Amazon</b> Applied Scientist Intern   Mentor: <a href="#">Wenqin Hu</a> Project: Predicting product return trends from historical data using LLMs for A/B testing experiments	<b>Seattle, USA</b>
<b>Aug 2024</b> <b>May 2024</b>	<b>Amazon</b> Applied Scientist Intern   Mentor: <a href="#">Wenqin Hu</a> Project: Grounded explanations for black-box Size Recommendation systems using LLMs	<b>Seattle, USA</b>
<b>Aug 2022</b> <b>May 2022</b>	<b>Google Summer of Code   Google People + AI Research</b> Developer   Mentor: <a href="#">Ryan Mullins</a> Project: <a href="#">Tabular Feature Attributions</a> and <a href="#">Salience Methods</a> for Language Interpretability using LIT	<b>Remote</b>
<b>May 2022</b> <b>July 2021</b>	<b>Wells Fargo</b> Program Associate   Mentor: <a href="#">Aswathy P S</a> Project: Interactive visualizations to track adoption metrics for Microsoft Teams and Zoom, Automatic detection and editing of system configurations for video conferencing devices	<b>Bangalore, India</b>
<b>Aug 2020</b> <b>Jun 2020</b>	<b>Google Summer of Code   mlpack</b> Student Developer   Mentors: <a href="#">Ryan Curtin</a> , <a href="#">Sreenik Seal</a> Project: Computer vision <a href="#">functionality</a> and loss functions for <a href="#">mlpack v4</a>	<b>Remote</b>
<b>Aug 2020</b> <b>Mar 2020</b>	<b>University of Bremen</b> Research Intern   Advisor: <a href="#">Gabriel Zachmann</a> Project: Heuristic Time of Impact algorithm for Continuous Collision Detection for <a href="#">CollDet</a> .	<b>Bremen, Germany</b>

### Selected Publications

- [S.1] **Metadata Conditioned Large Language Models for Localization** [PDF | Code]  
[Anjishnu Mukherjee](#), Ziwei Zhu, Antonios Anastasopoulos  
Under Review [ArXiv]
- [C.7] **Crossroads of Continents: Automated Artifact Extraction for Cultural Adaptation with Large Multimodal Models** [PDF | Code]  
[Anjishnu Mukherjee](#), Ziwei Zhu, Antonios Anastasopoulos  
IEEE/CVF Winter Conference on Applications of Computer Vision [WACV'24]
- [C.6] **BiasDora: Exploring Hidden Biased Associations in Vision-Language Models** [PDF | Code]  
Chahat Raj, [Anjishnu Mukherjee](#), Aylin Caliskan, Antonios Anastasopoulos, Ziwei Zhu  
Conference on Empirical Methods in Natural Language Processing [EMNLP Findings'24]

- [C.5] **Breaking Bias, Building Bridges: Evaluation and Mitigation of Social Biases in LLMs via Contact Hypothesis** [PDF | Code]  
Anjishnu Mukherjee\*, Chahat Raj\*, Aylin Caliskan, Antonios Anastasopoulos, Ziwei Zhu  
AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society [AIES'24]
- [C.4] **Global Gallery: The Fine Art of Painting Culture Portraits through Multilingual Instruction Tuning** [PDF | Code]  
Anjishnu Mukherjee, Aylin Caliskan, Ziwei Zhu, Antonios Anastasopoulos  
Conference of the North American Chapter of the Association for Computational Linguistics [NAACL'24]
- [C.3] **SALSA: Saliency-Based Switching Attack for Adversarial Perturbations in Fake News Detection Models** [PDF | Code]  
Anjishnu Mukherjee\*, Chahat Raj\*, Hemant Purohit, Antonios Anastasopoulos, Ziwei Zhu  
European Conference on Information Retrieval [ECIR'24]
- [C.2] **Global Voices, Local Biases: Socio-cultural Prejudices across Languages** [PDF | Code]  
Anjishnu Mukherjee\*, Chahat Raj\*, Ziwei Zhu, Antonios Anastasopoulos  
Conference on Empirical Methods in Natural Language Processing [EMNLP'23]
- [C.1] **True and Fair: Robust and Unbiased Fake News Detection via Interpretable Machine Learning** [PDF | Code]  
Chahat Raj, Anjishnu Mukherjee, Ziwei Zhu  
AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society [AIES'23]

## Talks

- “Crossroads of Continents: Automated Artifact Extraction for Cultural Adaptation with Large Multimodal Models”**  
 > WACV March 2025 (Arizona, USA)
- “Tutorial: Diffusion Models”**  
 > CS678, Advanced NLP - Guest Lecture @ GMU Nov 2024 (Fairfax, USA)
- “Multilingual socio-cultural biases”**  
 > Multilinguality and Language Diversity - Invited Speaker Series @ UToronto Sep 2024 (Remote)
- “Global Gallery: The Fine Art of Painting Culture Portraits through Multilingual Instruction Tuning”**  
 > MASC-SLL @ JHU May 2024 (Baltimore, USA)
- “Cross-Lingual Biases and Cultural Understanding in LLMs”**  
 > NL+, the Natural Language Processing Lunch Seminar @ University of Notre Dame Feb 2024 (Remote)

## Awards

- Outstanding Reviewer** EMNLP 2024
- Outstanding GTA Award @ GMU, 2024** For Advanced NLP, CS 678.
- Summer Graduate Research Award @ GMU, 2023** For evaluating socio-cultural biases in multilingual language models.
- Scholarship @ DAAD WISE, 2020** Awarded USD 3K by the German Academic Exchange Service (1 of 130 across India).

## Teaching

- CS 678 Advanced Natural Language Processing, GMU** Teaching Assistant Fall'23, Spring'24  
 > Responsible for aiding in developing new assignments, 1:1 student tutoring and assignment grading.
- CS 112 Introduction to Python Programming, GMU** Teaching Assistant Fall'22, Spring'23  
 > Responsible for teaching labs, 1:1 student tutoring, creating lab modules, assignment grading, monitoring exams.

## Academic Service

- Reviewer** ACL ARR - '23-'26 (EMNLP, ACL, NAACL, EACL)
- Sub-Reviewer** AIES - '23-'25; COLM - '24-'25
- Reviewer (Workshops)** AfricaNLP - '22-'26; New In ML - NeurIPS'23; WinNLP - EMNLP'25,'24; LTEDI - EACL'24