

Arshia Arya

PhD Student, University of California, San Diego

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Education

University of California, San Diego

Ph.D., Computer Science

Current advisor (Rotation): Haojian Jin

San Diego, CA

Sept 2023 - Present

Birla Institute of Technology and Science (BITS) Pilani

B.E., Computer Science & M.Sc. Economics (Department Rank 2)

CGPA: 9.26/10.00 (Distinction)

Goa, India

June 2021 - Aug 2016

Experience

Aug 2023	Microsoft Research	Bangalore, India
Jun 2021	Research Fellow / Advisors: Dr. Joyojeet Pal, Ms. Tanuja Ganu, Dr. Mohit Jain	
Jan 2021	Research Intern / Advisor: Dr. Joyojeet Pal	
Aug 2020	Research Intern / Advisor: Dr. Amit Sharma	
Jul 2020	Intuit Inc.	Bangalore, India
May 2020	Software Engineering Intern	

Publications

S=In Submission, C=Conference, W=Workshop, P=Poster/Demo, J=Journal

- [S.2] **Catch, Corroborate and Communicate: The Contours of Professional fact-checking in India**
Arshia Arya, Soham De, Syeda Zainab Akbar, Saloni Dash, Joyojeet Pal
[In Submission]
- [S.1] **Vivaran : A News Aggregation Framework for Organization Level News Consumption**
Arshia Arya, Shruti Srinath, Joyojeet Pal, Mohit Jain, Anirban Sen
[Working Paper]
- [C.1] **DISMISS: Dataset of Indian Social Media Influencers on Twitter**
Arshia Arya*, Soham De*, Dibyendu Mishra*, and Gazal Shekhawat*, et.al
ICWSM 2022: International Conference for Web and Social Media [ICWSM '22]
- [C.2] **Closed Ranks: The Discursive Value of Military Support for Indian Politicians on Social Media**
Agrima Seth, Soham De, Arshia Arya, Joyojeet Pal
ICTD 2022: International Conference on Information And Communication Technologies and Development [ICTD '22]
- [C.3] **Narrative Building in Propaganda Networks on Indian Twitter**
Saloni Dash, Arshia Arya, Sukhmidh Kaur, Joyojeet Pal
ACM Web Science 2022 [ACM Web Science '22]
- [J.1] **Unusual Suspects: Big Business Twitter, citizenship and immigration debates in India and the United States**
Shehla Rashid Shora*, Arshia Arya* and Joyojeet Pal
Global Policy [Global Policy]
- [P.2] **Beyond Business: A Poster Contrasting CEO Activism on Social Media in India and the United States**
Arshia Arya*, Shehla Rashid Shohra*, and Joyojeet Pal
ACM COMPASS: Computing and Sustainable Societies, 2021 [ACM COMPASS '21]
- [P.1] **Leveraging Question Answering to Understand Context Specific Patterns in Fact Checked Articles in the Global South**
Arshia Arya, Saloni Dash, Syeda Zainab Akbar, Joyojeet Pal, Anirban Sen
ACM COMPASS: Computing and Sustainable Societies, 2022 [ACM COMPASS '22]
- [S.3] **Rihanna versus Bollywood: Twitter Influencers and the Indian Farmers' Protest**
Dibyendu Mishra, Syeda Zainab Akbar, Arshia Arya, and Saloni Dash, Rynaa Grover, Joyojeet Pal
[Arxiv]

Reviewer ICSWSM '22/'23/'24, CSCW'23/'24, CHI'24
Student Volunteer Ubicomp '23

Selected Research Projects

Fact-checking for the Global South

Jun'21 - Present

Advisor: [Dr.Joyojeet Pal](#)

- > Annotated existing databases of fact checked articles with events and thematic categories from all major independent and conglomerated fact checking organizations.
- > Used information extraction methods like Question Answering to understand the patterns of misinformation spread during key events like elections, communal events, health mishaps etc.
- > Open coded interviews and supplemented the qualitative findings obtained as a result of conducting qualitative interviews with professional fact checkers.
- > Build a tool that helps leverage the patterns in older fact checked articles in a systematic manner so as to be used by fact checkers to aid and expedite their process of fact checking new articles.

Design Study to Understand Organization News Consumption Patterns

Jan '22 - Present

Advisor: [Dr.Mohit Jain](#), [Dr.Joyojeet Pal](#)

- > Designed a longform human curated news aggregator that delivers news on topics of interest to the workplace organization.
- > Designed a pre and post study survey, conducted it in an org of 150+ people, wrote logging scripts for clicks and used the Microsoft Graph API to capture engagement (reactions and comments) data to capture the patterns of consumption of the news aggregator.
- > Conducted post- study interviews about the pattern of usage for all strata of clickers.

Building a Database of Indian Influencers

Jan'21 - Aug '21

Advisor: [Dr.Joyojeet Pal](#)

- > Helped build a database of 11k+ influential accounts across categories such as entertainers, journalists, businesspersons.
- > Starting from a seed set of individuals, snowballed friends of friends multiple times, and rank ordered individuals based on the number of in-group connections, and overall followers.

Causal Impact Estimation in Propaganda Networks

Jul'21 - Oct '21

Advisor: [Dr.Joyojeet Pal](#)

- > Worked on identifying propaganda networks under key political events in the Indian context.
- > Represented social concepts in computationally tractable and identifiable graph networks and computed Impact Estimation measures of nodes using causal inference.

Selected Software Projects

Causal refutation methods in DoWhy

Aug'20 - Dec '20

- > Tested out existing refutation methods for causal machine learning systems on synthetic data and real life datasets
- > Designed a new method on top of the existing method that solved the problem of unobserved confounding and experimented various possible methods
- > Evaluated state-of-the-art causal estimators and developed a method to rank them for any data-set using refutation tests.
- > Integrated the [new method](#) to the dowhy library - a widely used library by Microsoft for causal inference

Building a tool for journalists to aid their curation process

Jan'22 - Present

- > Working with Shubham Atreja, PhD Student at UMSI, on designing and building a tool for journalists using which they can select articles for their newsletters
- > Using Javascript, MongoDB, Cognitive Search and Retool, built the UI and backend to implement features like Search, filters and ranking

HyWay: Enabling Unstructured Conversations in the New Hybrid World

Oct'21 - Feb '22

Piloted in the Microsoft Global Hackathon 2021

- > Developed a hybrid communication platform to improve interactions between today's physical and virtual users
- > Designed a virtual map of an office floorplan for fluid movement, muffled audio of users based on the distance for porous conversations, and setup hybrid conversation zones on the office floor for seamless interaction
- > Deployed the prototype during a conference with 100+ attendees

Academic Service and Teaching

Instructor at Center for Technical Education

Jan'21 - Jun '21

› Teaching various modules on Causal Inference and conducting practical assignments for first and second year students

Teaching Assistant, Object Oriented Programming

Jan'20 - Oct '20

› Conducted laboratory sessions for 150+ undergraduate students for programming assignments as well as formulated the assignments

Honours and Awards

Google India AI Summer School One of the 50 students in the country who got selected for the summer school in the Human Computer Interaction+ AI 4 Social Good track.

Institute Merit Scholar (Dean's List) Recipient of the merit scholarship in the form of a waiver of 40% of the tuition fees, awarded to top 2% students of the Institute for 6 consecutive semesters.

Pratibha Samman Scholarship Awarded scholarship of INR 25,000 by the State governor for extraordinary academic and co-curricular achievement amongst 10,000+ students

Media Coverage

"Indian Business Doesn't Speak Up Against Injustice. Here's Proof."- Bloomberg Quint

"Koo has a 'stronger network' than its bigger rival Twitter, says study." - Business Standard

"Is Mahua Moitra India's AOC? "- The Nation

The broken mirror: Making sense of Indian politics on social media - Invited Talk at CSH-IIITD Symposium

Leadership and Volunteering

Lead Organizer, TEM Reading Group Organized Paper Reading Group at the Technology in Emerging Market Group at Microsoft Research.

DIB Committee Member(Core) Conducted workshops related to Diversity, Inclusion and Belonging.

Co-Organizer, SMIC 2022 Organizing student paper session and inviting speakers for Indian Social Media Influencer's conference at UMSI.

Co-Founder, BITS Goa Women in Tech Founded a technical community for women for collaborations and mentorships with 180+ members. Conducted various events like Ask me Anything Sessions with seniors, Coding Leagues etc.