Anupam Guha

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Education

Doctor of Philosophy in Computer Science
University of Maryland, College Park, MD, USA *August 2011 to December 2017, GPA: 4.0/4.0*
Thesis: Data and Methods for Reference Resolution in Different Modalities

Master of Science in Computer Science
Georgia Institute of Technology, Atlanta, GA, USA *August 2009 to August 2010, GPA: 4.0/4.0*

Bachelor of Technology in Information Technology
Guru Gobind Singh Indraprastha University, New Delhi, India *2005–2009, CPI: 83%, First Class with Distinction*

Academic Appointments

Assistant Professor at Centre for Policy Studies, IIT Bombay *September 2019–current*
I work on AI policy. How AI systems, especially which work with natural language, impact and are impacted by labour, capital, and social-political-economic relationships, and how should policymaking take cognisance of it. This work has connections to the political economy of automation. I am also interested in and at times work on multimodal AI systems, computational linguistics, the political economy of "AI criticism", and other allied problems.

- ***Associated faculty*** at *Centre for Machine Intelligence and Data Science, IIT Bombay* *July 2021–current*

- ***Associated faculty*** at *Trust Lab, IIT Bombay* *June 2023–current*

- ***Associate faculty fellow*** at *Centre for Responsible AI, IIT Madras* *October 2024–current*

Publications

Working Papers

1. **Anupam Guha**. Digital Taylorism in Indian Workplaces and The Myth of Productivity. *submitted*.

2. Avnika Nagar, Anushka Jain, and **Anupam Guha**. The Dangers of Reifying Mass Automatic Surveillance via 'Responsible' FRT in India. *submitted*.

3. Satyam Mohla, **Anupam Guha**. Socio-economic landscape of digital transformation & public NLP systems: A critical review. *submitted*.

Journal Publications

1. Devasmita Jha, Shishir Kumar Jha, and **Anupam Guha**. A Critical Evaluation of the Indian Ride-Hailing Ecosystem and its Impact on Decent Work Standards, The Indian Journal of Labour Economics, (2025)

2. Devasmita Jha, Shishir Kumar Jha, and **Anupam Guha**. Rating Systems A Drivers' Perspective, Economic & Political Weekly vol. 60 issue 4, (2025)

3. Yezhou Yang, **Anupam Guha**, Cornelia Fermüller, and Yiannis Aloimonos. A Cognitive System for Understanding Human Manipulation Actions, *Advances in Cognitive Systems*, (2014).

Conference Publications

1. Satyam Mohla, Sidharth Mohla, **Anupam Guha**, and Biplab Banerjee. Multimodal Noisy Segmentation based fragmented burn scars identification in Amazon Rainforest, *IEEE International Conference on Systems, Man, and Cybernetics (SMC)*, (2020).

2. Mohit Iyyer, Varun Manjunatha, **Anupam Guha**, Yogarshi Vyas, Jordan Boyd-Graber, Hal Daumé III, and Larry Davis. The Amazing Mysteries of the Gutter: Drawing Inferences Between Panels in Comic Book Narratives, *Conference on Computer Vision and Pattern Recognition (CVPR)*, (2017).

3. Mohit Iyyer, **Anupam Guha**, Snigdha Chaturvedi, Jordan Boyd-Graber, and Hal Daumé III. Feuding Families and Former Friends: Unsupervised Learning for Dynamic Fictional Relationships, *North American Association for Computational Linguistics (NAACL)*, (2016). Best Paper Award

4. **Anupam Guha**, Mohit Iyyer, Danny Bouman, and Jordan Boyd-Graber. Removing the Training Wheels: A Coreference Dataset that Entertains Humans and Challenges Computers, *North American Association for Computational Linguistics (NAACL)*, (2015).

5. Yezhou Yang, **Anupam Guha**, Cornelia Fermüller, and Yiannis Aloimonos. Manipulation Action Tree Bank: A Knowledge Resource for Humanoids, *IEEE/RAS International Conference on Humanoid Robots*, (2014).

6. **Anupam Guha**, Yezhou Yang, Cornelia Fermüller, and Yiannis Aloimonos. Minimalist Plans for Interpreting Manipulation Actions, *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, (2013).

7. Hyungsin Kim, **Anupam Guha**, Young Suk Cho, and Ellen Yi-Luen Do. Sketch-Based Screening for Cognitive Impairment Detection: A Human Centered Approach, *ACM Conference on Human Factors in Computing Systems (CHI)*, (2010).

8. **Anupam Guha**, Hyungsin Kim, and Ellen Yi-Luen Do. Automated Clock Drawing Test through Machine Learning and Geometric Analysis, *Proceedings of the 16th International Conference on Distributed Multimedia Systems (DMS)*, (2010).

Workshop Publications

1. Satyam Mohla, **Anupam Guha**, and Bishnupriya Bagh. A Material Lens to Investigate the Gendered Impact of the AI Industry, *International Joint Conference on Artificial Intelligence (IJCAI) Workshop on AI for Social Good*, (2021).

2. **Anupam Guha**, Mohit Iyyer, and Jordan Boyd-Graber. "A Distorted Skull Lies in the Bottom Center..." Identifying Paintings from Text Descriptions, *North American Association for Computational Linguistics (NAACL) Human-Computer QA Workshop*, (2016).

3. **Anupam Guha**, Hyungsin Kim, and Ellen Yi-Luen Do. Re-Examining the Mental Imagery Debate with Neuropsychological Data from the Clock Drawing Test, *Proceedings of the 7th AAAI Conference on Visual Representations and Reasoning: A workshop at 24th AAAI Conference*, (2010).

4. Hyungsin Kim, Young Suk Cho, **Anupam Guha**, and Ellen Yi-Luen Do. ClockReader: Investigating Senior Computer Interaction through Pen-based Computing, *CHI Workshop on Senior-Friendly Technologies: Interaction Design for the Elderly*, (2010).

Reports and Policy Publications

1. Anushka Jain and **Anupam Guha**. IFF's Comments on Niti Aayog's paper on "Responsible AI for All: Adopting the Framework: A use case approach on Facial Recognition Technology", *Internet Freedom foundation*, (November 2022).

Non-academic Media Publications

1. Yameena Zaidi and **Anupam Guha**. Indian gig economy in 2024: Faster delivery and slow movement of rights for 'delivery partners', *The Indian Express*, (December 2024)

2. Yameena Zaidi and **Anupam Guha**. Rights of the New Worker: Notice period, ratings transparency, *The Indian Express*, (July 2024)

3. Abhishek Mali and **Anupam Guha**. Why AI and the jobs crisis don't feature in the 2024 general election, *The Indian Express*, (May 2024)

4. **Anupam Guha**. What government advisory – and its critics – don't get about AI, *The Indian Express*, (March 2024)

5. **Anupam Guha**. An AI for the People, *The Indian Express*, (December 2023)

6. **Anupam Guha**. The Data Protection bill will enable privacy violation, not guard against it, *The Indian Express*, (August 2023)

7. **Anupam Guha**. What technology leaders asking for a six-month halt on AI don't want you to know, *The Indian Express*, (July 2023).

8. **Anupam Guha**. The Dangers of Policy by Analogue in The Draft Indian Telecommunication Bill, 2022, *Hindustan Times*, (November 2022).

9. **Anupam Guha**. Artificial scapegoat: Why algorithms can't be blamed for political or corporate decisions, *The News Minute*, (November 2019).

Honours, Grants, Awards, Consultancies, and Activities

Trust Lab Grant 2023 from Trust Lab IITB: INR 6,00,000	*August 2023 - July 2024*
Consultancy Project for Digital Futures Lab: INR 6,00,000	*September 2022 - December 2022*
IRCC Seed Grant from IITB: INR 20,00,000	*February 2021 - January 2024*
Young Faculty Award from IITB: INR 4,00,000	*August 2019 - July 2023*
Qualcomm Innovation Fellowship, Qualcomm Award: $100,000 (Share: $50,000)	*August 2016 - July 2017*
Best Paper Award, NAACL	*June 2016*
Dean's Fellowship, University of Maryland Award: $5,000	*August 2011 - July 2013*

Past Research Experience

Graduate Research Assistant at Computational Linguistics and Information Processing Lab, University of Maryland,
with Dr. Jordan Boyd-Graber   *June 2014–August 2014 and January 2015–May 2015*
Working on multimodal coreference resolution (primary research interest) and multimodal representations/embeddings.
Working on coreference driven factoid question answering.

Graduate Research Assistant at Center for Automation Research, University of Maryland,
with Dr. Yiannis Aloimonos   *June 2012–August 2012, June 2016–August 2017*
Working on manipulation action understanding with planning and linguistic information.
Working on multimodal coreference resolutions (primary research interest) among images, text and videos.
Working on semantic feedback in deep neural networks.
Working on zero shot learning using word embeddings.
Working on coreference guided word embeddings.

Graduate Research Assistant and Master's Project at Health system's Institute, Georgia Institute of Technology,
with Dr. Ellen Yi-Luen Do   *January 2010–July 2010*

Worked on using machine learning to analyse existing psychometric data of patients suffering from mental disorders,
Worked with HCI doctoral students at GaTech and doctors at the Emory University to design new ways to collect, analyse, and predict with psychometric data

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Work Experience

Senior Researcher at Comcast Labs, DC/Philadelphia   *September 2017–April 2019*
Worked on improving cross domain embedding models, solving problems with current embedding models, multimodal embeddings
Worked on unsupervised analysis of media chatter data

Research Intern at Comcast Labs, DC supervised by Dr. Ferhan Ture   *May 2016–August 2016*
Worked on extracting deep metadata (narrative structure, relationships, events, etc) from movie scripts using deep architectures (RNN, dictionary learning, deep hierarchical topic models)
Worked on unsupervised analysis of dialogue.

Research Engineer in NSI Infinium Global Pvt. Ltd., India.   *September 2010–May 2011*
Responsibilities included devising AI and machine learning solutions to assist user personalization from navigation/purchase history, SEO, mining algorithms and assisting miscellaneous development projects

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Teaching Experience and Mentor Roles

Assistant Professor at Centre for Policy Studies, IIT Bombay   *September 2019–current*

Graduate Courses Taught as Instructor:

PS 644, Advanced Topics in AI, Data, and Policy   *Spring 2024, Spring 2025*
(Designed and first offered by me)

PS 643, Introduction to AI, Data, and Policy   *Fall 2023, Fall 2024*
(Designed and first offered by me)

PS 626, AI, Data, and Policy   *Spring 2020, Spring 2021, Spring 2022, Spring 2023*
(Designed and first offered by me)

PS 630, Technology and the Future of Workers   *Spring 2021, Fall 2021, Fall 2022, Spring 2024, Spring 2025*
(Designed and first offered by me)

(shared teaching) PS 609, Research Methodology and Design   *Fall 2021, Fall 2023, Fall 2024*
(shared teaching) PS 610 Quantitative and Qualitative Research Methods   *Spring 2021*

Faculty Advisor: PhD

1. Abhishek Sharad Mali, CPS PhD 2020 –
2. Avnika Nagar, CPS PhD 2021 –
3. Iznallah, CPS PhD 2021 –
4. Nikita Amar Jha, PhD conversion from MPP 2020-22
5. Purnima Rohilla, PhD conversion from MPP 2021-23

Faculty Advisor: Masters (current)

1. Hemanth O, CPS MPP 2023-25
2. Durgsh Ingle, (co-advised), CPS MPP 2023-25

Faculty Advisor: Masters (alumni)

1. Krish Jaiswal, CPS MPP 2022-24, Thesis: Digital Watch: Unraveling the Surveillance-Industrial Complex in Hyderabad
2. Preeti Kumari, (co-advised), CPS MPP 2022-24, Thesis: Empowering the Livelihoods: The Impact of Agroecology on Sustainability Among Small Landholder Female Farmers in Kasdol, Chhattisgarh
3. Koyal Sindhu, (co-advised), HSS MPhil 2021-23, Thesis: Expanding digital healthcare in India- Exploring the case of telemedicine
4. Shadab Alam, CPS MPP 2021-23, Thesis: Examining and Navigating the Role of Civil Society in Shaping Data Protection Policy: A Comparative Study of India and Europe
5. Surujmoni Thakuria, CPS MPP 2021-23, Thesis: Demystifying the Open Government Data Policy of India
6. Ojasvi Verma, (co-advised), CPS MPP 2020-23, Thesis: Explainable AI in Banking Domain
7. Tisha Chakrabarti, CPS MPP 2020-22, Thesis: How does Facebook moderate hateful content? A study of the social media platform's content moderation practices, policies, and the existing legal framework to regulate online hate speech with a particular emphasis on India
8. Nikita Amar Jha, CPS MPP 2020-, converted to a PhD student
9. Anushree Choudhury, CPS MPP 2020-22, Thesis: Compete or Complement: The impact of #AIforAll on cancer care professionals
10. Taijshee Mishra, CPS MPP batch of 2019-21, Thesis: Use of Artificial Intelligence in Healthcare in India, EU and US with a focus on its impact on Labour

Other teaching activities in Continuing Education Programmes, summer/winter schools, web courses etc:

Instructor, Course on AI and Policy, in IITB Winter School *December 2024 (20 hours)*

Module on AI, ML, and Policy at TIAA ACE, industrial continuing education organised by IIT Bombay, *Fall 2021 (24 hours), Spring 2022 (30 hours), Spring 2023 (30 hours), Summer-Fall 2024 (30 hours)*

Instructor, Module on Responsible AI, Long Term Training Program for SBI data scientists - SBI Technology Hub, IITB *July 2024 (10 hours)*

Instructor, "Introduction to AI Governance," SBI-IITB: training program for upskilling SBI Bankers *March 2024 (2 hours)*

Instructor, Course on Policymaking in AI and Data, in IITB Winter School *December 2023 (20 hours)*

Instructor, Two modules on The Economics and Politics of the Policy Process around AI and Digital Technology and Society interface: Bringing it into University Curriculum taught at Winter School on Digital Technology and Society, Human Sciences Research Centre, IIIT Hyderabad *November 2023*

Speaker, ACM winter school on Fairness, Accountability, and Transparency in Artificial Intelligence, IIT Kharagpur *January 2020*

Speaker, Summer school at CITAPP IIIT Bengaluru *December 2019*

Graduate Teaching Assistant at Department of Computer Science, University of Maryland. Have led recitations in:

Java *Fall 2012*

Java II *Spring 2013, Summer 2013, Summer 2014*

C *Fall 2011, Spring 2016*

Discrete Mathematics *Spring 2012*

Image Processing *Fall 2013, Fall 2014*

Co-Mentor of Undergraduate Research Co-Mentored Team Virtual, a team of five undergraduate students at University of Maryland, in their Gemstone Multidisciplinary Research Program, for a duration of four years.

Fellow Mentors: Dr. Yiannis Aloimonos, Gregory Kramida

Undergraduates mentored: Emily Cheung, Chris Lim, Sharise Marshall, Chris Purdy, Christina Winkler

Thesis: Adapting Behavioral Parent Training as an Interactive Computer Game

Service

Organiser

Member of Organising Committee, The 5th India Public Policy Network Conference, IITB, Mumbai, December 2024

Discussant, Panel on "Governance of Algorithms in Platform Economy", in Policy Dialogues on Gig and Platform Economy, ADCPS, IITB, Mumbai, November 2022

Chief organiser of CPS, IITB seminar"Artificial Intelligence and Policy: Breaking the Technological Ice" conducted in 2020 and 2021.

Co-organiser UMD-Ulster Cognitive Robotics Workshop (UUCRW), 2016.

Program Committee and Reviewer COLING 2025 (track committee: Ethics, Bias, and Fairness; Interpretability and Explainability), IJCNLP-AACL 2023, ACL 2023, AACL-IJCNLP 2022, COLING 2022 (track committees: Integrated Systems and Applications; Information Extraction, Knowledge Extraction, and Text Mining), EMNLP 2021, N/Core tech RIG Fellowship 2020, COLING 2020 (track committee: TextualInference-QA), ACL 2019 (track committee: Question Answering), CVPR 2019, ACCV 2018, COLING 2018, NAACL HLT 2018 (track committee: Generation area), ECCV 2018, IJAIT 2018, ACL 2018 (track committee: Question Answering), NAACL HLT 2018, EMNLP 2018, IEEE RA-L 2017, CVPR 2017, ICCV 2017, (PC member) MASC-SLL 2017, IEEE RA-L 2016

Volunteer NAACL 2015

Invited Talks

Section talk, "Human Resource Analytics and Artificial Intelligence: Disruptive Technologies with Disparate Implications for Labor in the Global South - A Policy Study of the Indian Context," International Conference on New Technologies and the Future of Work in the Global South, IHD Delhi *November 2023*

Section talk, "Digital Taylorism in Indian Workplaces and The Myth of Productivity," International Conference on New Technologies and the Future of Work in the Global South, IHD Delhi *November 2023*

Speaker, "The Political Roots of AI Policy: Or Why Debiasing Is a Misleading Solution," IndiaFOSS Bangalore *October 2023*

Invited talk, "Limits of Benchmarking," Emerging Advances in AI Systems: Considerations and Implications for India, Digital Futures Lab, Goa *August 2023*

Section talk, ICPP6, "The interplay of AI, policy, and workforce in India: An analysis of governance and innovation dilemma," 6th International Conference on Public Policy - Toronto 2023 *June 2023*

Speaker, "The Auditability of Facial Recognition Systems", recorded lightening talk at MozFest 2023 *March 2023*

Section talk, "The Rise of Digital Workplace Surveillance in India", Artificial Intelligence and Human Rights, NLSIU, Bengaluru

December 2022

Invited talk, "AI and Cybersecurity: Landscape and Concerns", Workshop on Cybersecurity to Develop Skill Enhancement Learning, Amity University, UP   *October 2022*

Speaker in Capacity Augmentation Workshop for the Core Support Group members, SEED Division, DST Expert speaker CTARA, IITB   *January 2020*

Invited talk, AI and Ethics, Governance, Policy: Landscape and Roadmap, Summer school at CITAPP IIIT Bengaluru *December 2019*

Invited talk, On a Materialist Conception of AI and Ethics, Summer school at CITAPP IIIT Bengaluru   *December 2019*

Section talk, NAACL 2016, "A Distorted Skull Lies in the Bottom Center..." Identifying Paintings from Text Descriptions, San Diego   *June 2016*

Section talk, NAACL 2015, "Removing the Training Wheels: A Coreference Dataset that Entertains Humans and Challenges Computers," Denver   *June 2015*

Section talk, IROS 2013, Minimalist Plans for Interpreting Manipulation Actions, Tokyo   *November 2013*

Seminars, Panels, and Outreach

Invited panelist at workshop "AI Sovereignty: Policy Pathways for the Future," Digital Futures Lab, Goa   *November 2024*

Invited Mentor and Participant to the CeRAI - Responsible AI UK Sandpit workshop on Responsible AI, organised by Centre for Responsible AI (CeRAI) IIT Madras, at Neemrana Rajasthan and Delhi   *September 2024*

Panelist, "Tech Policy takes the Center Stage," MumbaiFOSS 2.0, Mumbai   *April 2024*

Panelist, "Social Control in the Age of AI," Network Summit on AI, Nordic Centre in India, Delhi   *November 28 - December 1 2023*

Panelist in panel discussion on "Structuring the Data Economy: Negotiating Digital Identity," in Digital Identity Workshop, Trust Lab, IITB, Mumbai   *September 2023*

Speaker in podcast episode "AI, Labor and Public Policy", The Coffee House Experience   *August 2023*

Invited lecture for school students, "Artificial Intelligence and its Current and Future Impact on Indian Society", Popular Science Lecture Series, National Science Centre Museum, Mumbai   *April 2023*

Panelist in panel discussion on "Talking Back: A Conversation on Generative AI for the 21st Century", panel curated by Digital Futures Lab, Future Fantastic Festival , Bengaluru   *March 2023*

Speaker in Data Dialogue: Pan India Data Journalism Training Series, organised by Google News Initiative and DataLEADS, ADCPS, IITB, Mumbai   *March 2023*

Panelist in podcast episode "Decoding AI, ChatGPT & DALLE", The Big Story Podcast of The Quint   *February 2023*

Panelist in panel discussion on "Towards a Critical View of the Digital Economy", panel at Public Policy Dialogues: Bridging Research and Practice, Bharti School of Public Policy, ISB, Hyderabad   *January 2023*

Speaker in Faculty Development Program on Emerging Technologies by DST, GOI, Jamia Hamdard, New Delhi   *August 2022*

Speaker on "In Conversation with Anupam Guha: AI in workplaces and beyond", 'In Conversation with' series of Internet Freedom Foundation   *April 2022*

Panelist in panel discussion on "Data, Platforms, and AI: A Troubled Legacy", in Policy Dialogues 1, ADCPS, IITB, Mumbai *March 2022*

Panelist in panel discussion on Fairness, Accountability and Transparency, in Academic Research and Careers for Students Symposium (ARCS), ACM, Coimbatore, India   *February 2022*

Panelist in seminar, Beyond Ethics: Proposing a Political Economic Framework to Interrogate and Supplement Ethics in AI Policymaking, CEPE/IACAP Joint Conference, Hamburg   *July 2021*

Panelist in seminar, Rise of Employee Surveillance post COVID and Labour Rights Violations, IFF, Mumbai   *May 2020*

Panelist in A public meeting on NPR, AADHAAR and data protection, PUCL Maharashtra and Article 21 Trust, Mumbai *February 2020*

Talk: An Introduction and Critique of AI Policy in Indian Healthcare. Conducted at Jawaharlal Nehru University, Center for Social Medicine and Community Health.   *January 2019*

Talk series: What is to be done? Critique of and Alternatives to the Extractive Imagination of AI . Conducted at a) Center for

Policy Studies, Indian Institute of Technology Bombay, b) National Institute of Public Finance and Policy, c) Jawaharlal Nehru University, Center for the Study of Law and Governance. *January 2019*

Talk series: AI, Society, and Politics of the Future. Conducted at a) Bharati Vidyapeeth's College of Engineering, GGSIPU, b) Indraprastha Institute of Information Technology, Delhi, c) National Institute of Public Finance and Policy, d) Delhi University Political Science, e) Indian Institute of Technology, Delhi, f) Jawaharlal Nehru University, Center for the Study of Law and Governance, g) National Law University, Delhi. *February 2018*

Member, panel discussion at GUEST, GHOST, HOST: MACHINE! Marathon conducted by Serpentine Gallery and Radio Serpentine, London. Panel: In Conversation with Shuddhabrata Sengupta of Raqs Media Collective on the future social, political, and economic implications of AI, on its oppressive and emancipatory potentials for labour. *October 2017*

Did advocacy in the Language Advocacy Day 2017 event organised by JNCL-NCLIS as a member of the UMD delegation to meet Senatorial and Congressional staff. Met staff of House Committee of Science, Space, and Technology and the Senate Commerce, Science, and Transportation Committee. Argued for continued funding in language sciences and AI. *February 2017*

Poster presented at DARPA HRI Meeting in collaboration with Boston Engineering Corporation titled, Usage of Distributed Semantic Representations in Computational Linguistics and Computer Vision, *DARPA HRI*. *November 2016*

Talk on Introductory Artificial Intelligence to undergraduate students at Bharati Vidyapeeth's College of Engineering, Guru Gobind Singh Indraprastha University, India, organised by ACM. *August 2014*

Skills

Languages, systems, and tools: Python (NLTK, numpy, sklearn), MATLAB, Theano, Java, LaTeX, HTML, MySQL, Linux
Relevant graduate courses taken in AI Planning, Machine Learning, Computational Linguistics, Computer Vision, KBAI
Exposure to OCaml, Coq Theorem Prover, LLVM compiler, Scientific Computing

Natural Languages: Native/bilingual fluency in Bangla, Hindi, and English. Beginner in Mandarin, French, and Japanese.

References are available on request.