Aditya Gulati

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Summary

AI researcher bridging human behaviour and machine intelligence, grounded in cognitive science and psychology, and fluent in large-scale AI evaluation and model benchmarking. Combines controlled human-participant studies with computational model evaluation, translating findings from human behaviour directly into how AI systems are built to work with people.

Core Skills

Human-AI Interaction: Trust and reliance dynamics, human-AI teaming, decision support systems, human-machine team performance, collaborative AI design
AI Systems & Evaluation: Multimodal LLM evaluation, benchmark construction, behavioural AI assessment, cognitive bias analysis in generative models
Research Methods: Large-scale human-participant study design, controlled experiments, crowdsourced experimentation (Prolific, MTurk), mixed-effects modelling

Experience

PhD Researcher → Postdoctoral Researcher 2022–Present
ELLIS Alicante / University of Alicante

- Led a study of **2,700+ participants** quantifying how the attractiveness halo effect shapes AI-mediated judgment. Published in *Royal Society Open Science* (2024), covered by **40+ international media outlets**, and ranked in the **top 5% of Altmetric**
- Evaluated appearance-based and social biases across open-source multimodal LLMs (LLaVA, Qwen, DeepSeek), with findings published at ACM AIES (2025), FAccT (2026), and ECCV Workshop (2024)
- Released two **public research datasets**: AHEAD (2,748 participants) and LookismBench-SyntheticFaces (∼26,000 synthetic images), enabling reproducible evaluation of appearance bias in AI systems
- Developed **BIASeD**, a cross-disciplinary cognitive bias taxonomy synthesising psychology, behavioural economics, and cognitive science into a principled framework for human-aware AI design
- Contributed to **EU Horizon projects** (ELIAS, ELLIOT), co-authoring deliverables, presenting at consortium workshops, and building cross-sector collaborations with academic, industry, and public-sector partners across Europe

Visiting Researcher 2023–2024
Fondazione Bruno Kessler

- Conceived and delivered *Lookism: The Overlooked Bias in Computer Vision* (ECCV Workshop 2024) during the visit, and laid the empirical foundations for *Beauty and the Bias: Attractiveness Effects in Multimodal LLMs* (ACM AIES 2025)
- Built cross-institutional collaborations through the visit, bringing in co-authors from the University of Trento on the AIES paper

Research Intern / Visiting Scholar 2020–2021
Carnegie Mellon University

- Investigated how **task complexity** shapes individual and group performance in human-machine team settings at the **Dynamic Decision Making Lab** under Cleotilde Gonzalez
- Developed **computational models of group behaviour**, simulating decision-making in teams without direct communication to characterise performance bottlenecks in collaborative human-machine systems
- Published findings in *Computational Theory of Mind for Human-Machine Teams* (AAAI FSS 2021, Springer LNCS): task complexity and performance in individuals and groups without communication

Research Intern 2019
Ulm University

- Developed a brain-inspired motion estimation system at the Vision and Perception Science Lab, connecting biologically motivated modelling with machine vision

Student Affiliate Researcher 2018–2021
Multimodal Perception Lab, IIIT Bangalore

- Contributed to computer vision and cognitive modelling projects alongside my studies, building early research foundations in experiment design and applied AI

Selected Impact

- Research findings covered by **40+ international media outlets** and ranked in the **top 5% of Altmetric**, amplifying academic work to broad public audiences
- Invited to brief the **European Parliament jury committee** deliberating on the EU AI Act — translating empirical findings on AI bias directly into policy discussions
- Released two open research datasets enabling reproducible evaluation of appearance bias in AI systems
- Organised and sustained research communities reaching **1,000+ participants** — including the ELLIS Doctoral Symposium (200+ attendees), CAIHu workshop at AAAI (400+ across 2 editions), and an ongoing reading group with **500+ members**

Education

PhD in Computer Science 2022–2025
University of Alicante / ELLIS Unit Alicante
Advised by **Nuria Oliver**, **Bruno Lepri**, and **Miguel Angel Lozano**

Integrated MTech in Computer Science 2016–2021
IIIT Bangalore **CGPA: 3.88/4.00**

Selected Publications

- What is Beautiful is Still Good: The Attractiveness Halo Effect in AI Systems
  Aditya Gulati, Marina Martínez-Garcia, Daniel Fernández, Miguel Angel Lozano, Bruno Lepri, Nuria Oliver
  Royal Society Open Science, 2024 (top 5% Altmetric; covered in 40+ international media articles)
- Why Do We Trust Chatbots? From Normative Principles to Behavioral Drivers
  Aditya Gulati, Nuria Oliver
  CHI 2026 Workshop on Cognitive Biases and Trust in Evolving AI Systems
- Aesthetics as Structural Harm: Algorithmic Lookism in Generative Models
  Miriam Doh, **Aditya Gulati**, Corinna Canali, Nuria Oliver
  ACM FAccT, 2026
- Beauty and the Bias: Attractiveness Effects in Multimodal LLMs
  Aditya Gulati, Moreno D'Incà, Nicu Sebe, Bruno Lepri, Nuria Oliver
  ACM AIES, 2025
- Lookism: The Overlooked Bias in Computer Vision
  Aditya Gulati, Bruno Lepri, Nuria Oliver
  ECCV Workshop, 2024
- BIASeD: Bringing Irrationality into Automated System Design
  Aditya Gulati, Miguel Angel Lozano, Bruno Lepri, Nuria Oliver
  AAAI Fall Symposium Workshop, 2022

Leadership & Service

- **Accessibility Co-Chair**, ACM CHI 2026 — led accessibility efforts for **5,000+ attendees** at the largest CHI conference to date, ensuring equitable access across the full programme
- **Lead Student Organiser**, ELLIS Doctoral Symposium 2022 — end-to-end delivery of a **200+ attendee** international research event; managed venue, programme, speakers, and a **€50,000 budget**
- **Co-organiser**, CAIHu @ AAAI (2 editions) — **400+ registered attendees**, 50+ submissions, and 10+ invited speakers across both editions; established as a recurring venue for human-AI collaboration research
- **Co-organiser**, ELLIS Human-Centered ML reading group (2021–present) — **500+ members**, monthly sessions
- **Program Committee & Reviewer**: AIES, IC2S2, ECML-PKDD, HCAI@NeurIPS
- **Teaching Assistant**: Linear Algebra; Automata Theory and Computability (IIIT Bangalore)

Awards & Scholarships

National Postgraduate Scholarship (Government of India) 2021
DAAD Research Scholarship (German Academic Exchange Service) 2019
Dean's Merit List, IIIT Bangalore 2016–2021

Additional

Programming: Python, R, C++, JavaScript, Julia
ML & Evaluation: PyTorch, HuggingFace Transformers, vLLM, OpenCV, Pandas, NumPy
Statistical Methods: Mixed-effects modelling (lme4, Stan), regression modelling, non-parametric tests
Tools: Git, SQL, AWS