

# Dr Shyam Krishna

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## Research and Academic Background

### Current Roles and Affiliations

**The Alan Turing Institute - Post-doctoral Research Associate – Ethics / Public Policy:** From Jul 2022. Research on Public policy and Ethics of AI, and research-led consultation for the UK government, GPAI and Council of Europe.

- **Visiting Lecturer at Digital Environment Research Institute** at the Queen Mary University of London, (From Feb 2023) Involved in research and grant development in AI and Ethics.

### Past Roles and Affiliations

- **UCL - Post-Doctoral Research Fellow in Anthropology.** Nov 2021 – Jun 2022.
- **Visiting Lecturer at School of Management, Royal Holloway, University of London (2020 – 2022)** – Lecturing on Bias, Discrimination in AI & Data Justice in Gig-Economy, and on identifying ethical pathways to business analytics and data science in the industry to Masters in Business Information Systems, and Masters in Digital Innovation and Analytics programs.
- **Guest lecturer at UCL Anthropology (2022)** – Seminar on digital research methods and challenges.
- **Visiting Lecturer at ESCP Europe Business School (2018 & 2019)** – Delivering seminars and undertaking evaluations at undergraduate course on Introduction to Business & Marketing.

### Education

- **PhD**, Department of Digital Innovation and Management, **Royal Holloway, University of London** (2022).
- **Associate Fellow** of Higher Education Academy (2021).
- **Oxford Internet Institute- Summer Doctoral Programme** (2017).
- **MSc ICTs for Development**, University of Manchester (2013) - *Distinction (overall and dissertation)*.
- **MBA (Post Graduate Diploma in Management)**, Indian Institute of Management, Shillong (2010).
- **Bachelor of Engineering (Electronics & Communication)**, Anna University, India (2006) - *Distinction*.

## Research Experience

### Postdoctoral Research

**Advancing Data Justice (2022/2023):** Steering academic research, partner engagement and public policy outputs, of a collaborative partnership between the Turing, GPAI and 12 global research partners.

**Ethics of Synthetic Data (2023):** Served in an ongoing ethics research advisory role for the project at the Turing with the UK Government, focusing on the ethics of synthetic data in online safety and foundational AI. The report and academic output are forthcoming (April 2023 & July 2023).

**Beyond Individual Persuasion (2021/2022):** Interdisciplinary mixed-methods research between Anthropology, HCI and Built Environment at UCL. Conducted design ethnography workshop as the postdoctoral researcher, coordinated pilot IoT devices deployment and data collection to develop interactive visualisation and IoT sensing aiming at environmental change and energy justice. Partnered with energy co-operatives, architecture firms and local government on IoT use in home/building energy systems.

### Doctoral Research

**Doctoral Research Project (2018-2021):** Conducted an analysis of India's emerging gig-work, fintech, and digital identity technologies within the ecosystem of data sharing and AI practices. The thesis is a collection of papers researched and informed through two distinct funded projects as listed below.

**Urban Data, Inequality, and Justice – Case Study (2019):** Qualitative research, funded as primary researcher by the University of Manchester's Sustainable Consumption Institute (GBP 2,700).

- Conducted semi-structured interviews and participant observation on emerging digital identity and gig-work technologies and their impact on workers. Partnered with labour unions and delivered best practice recommendations in a report (2019) that was utilized by labour leaders in policy consultations.

**Between Digital Platforms and the Deep Sea (2019/2020):** Primary researcher/CoI on a project funded by Not-Equal (UKRI ~GBP 4,000) studying social justice implications of digital platforms on urban fishing communities using two studies:

- A mixed-method study of the spatiotemporal design of gig-work technologies and algorithmic practices of businesses, aiming to identify power dynamics between workers from the community and platforms.
- A qualitative study of policymaking, programme implementation, and social impact surrounding digital identity use among urban fishers.

#### ***Predoctoral and Engineering Research (selected)***

- **ICTs and Hope for Development (2013):** Research project on psycho-social dimensions of hope, studying users' engagement with information and communication technologies (ICTs). Developed case studies on the 'One Laptop per Child' initiative (Global) and agritech (India) - Paper published in 2016.
- **Telemedicine Research Consultancy (2009):** Conducted primary, mixed-methods research at health camps of Sankara Nethralaya Eye Hospital (India) to investigate telemedicine field-level processes and parameters of healthcare delivery for a cost-benefit evaluation in-line with prevailing Tamil Nadu state health policy.
- **Cost-Effective Wireless Sensor Network (2006) and Radio Frequency Propagation Measurements (2005):** Research Assistant on TIFAC-CORE for the Wireless Technology programme of the Department of Science and Technology (India). Designed and developed firmware for proto IoT ZigBee protocol wireless devices and sensors for site-level networking.

#### **Publications**

##### ***Peer-Reviewed Journals and Conference Proceedings***

- Krishna, S. 2020. **Spatiotemporal (in)justices in digital platforms:** An analysis of food-delivery platforms in south India. In: The Future of Digital Work: The Challenge of Inequality IFIP Joint Working Conference: 10-11 December 2020. [https://link.springer.com/chapter/10.1007/978-3-030-64697-4\\_11](https://link.springer.com/chapter/10.1007/978-3-030-64697-4_11).
- Krishna, S. 2020. **Digital Identity, Datafication and Social Justice:** understanding Aadhaar use among informal workers in South India. Information Technology for Development. <https://www.tandfonline.com/doi/full/10.1080/02681102.2020.1818544>
- Krishna, S. 2019. **Identity, Transparency, and Other Visibilities: A liquid surveillance perspective of biometric identity.** In: **DSA - Politics in Development Conference**, Oxford Department of International Development, Oxford. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4404834](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4404834).
- Krishna, S. & Zheng, Y. 2018. **'Many-eyed monsters and their lure - Surveillance, seduction, and governmentality'.** In: Living with Monsters? Social Implications of Algorithmic Phenomena, Hybrid Agency and the Performativity of Technology Conference, IFIP8.4, San Francisco, California. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4402843](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4402843).
- Heeks, R. and Krishna, S. 2016. **ICTs and Hope for Development:** A Theoretical Framework. The Electronic Journal of Information Systems in Developing Countries, 77. <https://onlinelibrary.wiley.com/doi/epdf/10.1002/j.1681-4835.2016.tb00563.x>

### Book Chapters

- Krishna, S. 2022. **Delivering (In)justice**: Contestations within India's digital food delivery platforms. In: Platform Labour and Global Logistics: A Research Companion. Routledge.
- Krishna, S. 2021. **The role of Gig-worker during crisis**: Consequences of COVID-19 on food delivery workers in South India. In: "COVID-19 from the Margins: Pandemic Invisibilities, Policies and Resistance in the Datafied Society" (Milan, Treré and Masiero, Eds).

### Policy Research Reports

- Pica Johansson, P., Bright, J., Krishna, S., Fischer, C. & Leslie, D. 2023. **Assessing the Ethics of Using Synthetic Data to Improve Online Safety**. The Alan Turing Institute | Public Policy Programme. Prepared for the UK Government (Publication in June 2023).
- Krishna, S. 2023. **Bridging the Gap for Gig Workers: Policy Pathways for Support and Protection**. A Study of Gig-Work Labour and Technology in Chennai, India. Policy Report submitted to Indian State of Tamil Nadu's Planning Commission.
- Krishna, S. et al. (Lead Respondent). 2023. **Response to the call for input to report on Digital innovation, Technologies and the Right to Health**. Prepared for the Human Rights Council - Special Rapporteur.

### Work in progress

- Krishna, S. Zheng, Y & Wu, P 2023 [Draft Available]. **Liquid Inclusion**: The Dynamics of Inclusion Under Datafication and Surveillance. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4399779](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4399779)
- Krishna, S. 2023 [Accepted]. **Intersubjectivity of Data and Labour: Seeking Data Justice in Gig-Work**. Part of the Special Issue on Data Justice in the *AI & Ethics Journal*. Publication: Late 2023.
- Krishna, S. 2023 [In Preparation]. **What would an anti-casteist AI system look like? (2023)** – Paper presentation scheduled at Many Worlds of AI- Intercultural Approaches to the Ethics of Artificial Intelligence Conference. The Leverhulme Centre for the Future of Intelligence (LCFI), University of Cambridge.
- Krishna, S. 2023 [In Preparation]. **The Labour of Claiming Identity and Making Data**. Invited Book Chapter in forthcoming 'Critical ICT4D' edited volume in Routledge.

### Workshops & Conferences (Selected)

- **Leeds Data Ethics Forum (2023)** – Invited Speaker. Data Justice for a Safe Digital City.
- **Digital Rights Asia-Pacific (2023)** – Invited Speaker. Panel on 'Decolonizing Data for Data Justice.'
- **Towards a Data Justice Framework for AI Developers (2023)** - Invited Speaker at MozFest session: Co-leading with a GPAI leader, a hands-on workshop for AI developers, to identify a range of challenges in acknowledging and mitigating algorithmic bias in AI development design, development and deployment.
- **Data Justice in Sub-Saharan African Context: Dealing with the challenges (2023)** – Invited Speaker at MozFest session: Co-presented convening a conversation raising awareness about Data Justice in African Context and creating a platform for discussion and advocacy.
- **When the State builds digital identity: Experiences from India, Kenya and Beyond (2023)** – Invited expert: Workshop & Roundtable at the LSE discussing South-South connections in the implementation and development of digital ID, the harms and challenges in ongoing digital identity sector.
- **Theorising and Grounding Datafication in India (2022)** - Invited expert: Workshop between academics, researchers and policy experts, jointly conducted by Centre national de la recherche scientifique (France) & IIIT-Bangalore (India) on the current state of the digital economy, data infrastructures and AI landscape of India.
- **COVID-19 from the Margins: Pandemic Invisibilities, Policies, and Resistance in the Datafied Society (2021)** - Speaker/author: Hosted by The Berkman Klein Center for Internet & Society in book launch as contributing author.

- **Surveillance in the Global South - Researchers' Workshop (2021)** - Session Leader: Workshop conducted by Surveillance in the Global South Research Network.
- **Gig-work at the margins (2021)** – Presentation: Digital Labour Geographies: Gig Work Futures RGS/IBG Conference.
- **Diagnostic; Women & Platform Livelihood (2020)** - Invited expert: Workshop to further the research landscape on gender and digital platforms, discussing research, investment, product development and policy. Hosted by Caribou Digital, a research organisation.
- **Building Digital Identities - A Scoping Study (2017)** – Invited expert: ESRC IAA Social Policy Network. U. of Exeter.

## Industry Experience

- **Head of Data - LSE (2016-2018) & UCL (2014-2016)**: Directed data analytics, visualization, and privacy assurance team, supporting fundraising and donor-relations functions; managed teams of data analysts at UCL (5 members) and LSE (6 members). Championed GDPR-compliant data and IT architecture policies at LSE and UCL, securing board-level commitments within Technology Architecture Board, Business Intelligence and Data Steering Group, and GDPR Project Group. Employed and commissioned data science and visualization projects and techniques for donor discovery, including dashboarding, predictive modelling, segmentation, clustering, propensity modelling, forecasting, and planning.
- **Consultant - Agilisys (Various local government projects, UK) (2013-2014)**: Delivered spatial analytics and data visualization solutions for multiple functions in city council-level digital transformation projects. Spearheaded analytics for equality monitoring of city council outcomes. Crafted data visualizations for leisure centre usage planning and housing requirements in various London boroughs.
- **Consultant - Cisco (India) (2010-2012)**: Managed a team of 2, developing complex forecasting, planning data analytics, dashboarding, and data visualization solutions. Conducted B2B data analytics and modelling for strategic partnerships based on 'Large Account Management Buy-Sell Hierarchy'. Executed SKU-level analytics for the 2012 Olympics network load monitoring project across Cisco remote delivery centres, implementing automation from technical usage logs. Delivered cost arbitrage modelling that resulted in \$1.7M in savings and guaranteed savings of \$140,000 per quarter across global project delivery centres.
- **Research Analyst - Siemens (India) (2009)**: Mapped the landscape of emerging telemedicine potential in India and analysed its ecosystem for the Software R&D wing of Siemens Healthcare.
- **Analytics Manager - MakeMyTrip (India) (2010)**: Led a team of 2 data analysts to design a comprehensive 'One-View Customer Experience Dashboard' and related analytics models across online travel product streams, servicing approximately 10,000 sales and post-sales transactions per day.
- **Network Engineer - Verizon (2008-2010)**: Overhauled internal risk assessment and incident reporting processes, implemented data analytics and reporting module for the web application, and managed procurement, budget, and vendor relationships; streamlined incident reporting to support 45 teams dynamically and contributed to the inception of 4 large-scale infrastructure projects.