

Ashwin Singh

(they/them)

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EDUCATION

Universitat Pompeu Fabra (UPF)

Barcelona, Catalunya

MSc. in Intelligent Interactive Systems - Big Data Track

September 2023 - July 2025 [Expected]

CGPA: 9.61/10 (Department Rank: 1)

Awarded 50% Tuition Waiver for Academic Excellence.

Indraprastha Institute of Information Technology Delhi (IIIT Delhi)

New Delhi, India

B.Tech. in Computer Science and Applied Mathematics

August 2017 - June 2021

CGPA: 8.73/10

Dean's List of Academic Excellence (2019-2020, 2020-2021).

Dean's Letter of Appreciation for significant achievements in thesis (<2% students).

EXPERIENCE

Research Assistant (R1)

Barcelona, Catalunya

Department of Justice, Government of Catalunya & UPF

May 2024 - Present

- Designed an algorithm to compute annual recidivism statistics, reducing error rates from 5% to nearly 0%, and facilitating real-time assessments for the calibration of risk-levels.
- Conducting research towards enacting fairness reforms within their risk-assessment system ([RisCanvi](#)).

Machine Learning Engineer (Part-Time)

Barcelona, Catalunya

Headout: A Travel Experiences Curated Marketplace

May 2023 - Aug 2023, Nov 2023 - Present

- Leading ML for personalization from algorithm design to development and experimentation, with a focus on recommendations to improve customer retention and diversify experiences for promoting new verticals.
- Designed a personalized recommender system by clustering users into interpretable segments, resulting in a relative uplift of 20% in click-through rates, 10% in predictive power and 5% growth in customer retention.
- Managing end-to-end data pipeline, including clustering, drift monitoring, candidate generation, and inference APIs, utilizing BigQuery, Airflow, Redis, Cloud Functions and App Engine.

Diversity, Equity and Inclusion Admin

Seattle, Washington, USA [Remote]

Queer In AI

April 2022 - April 2023

- Advancement leader of [Queer in AI](#), responsible for leading community research, drafting inclusive policies, organizing workshops and socials at academic conferences, mentoring volunteers and fundraising.
- Led paper writing with over 50 co-authors on the role of participation, decentralization and intersectionality in shaping Queer in AI's programs. Awarded [Best Paper](#) at [FAccT 2023](#)
- Collaborated with [META](#), [Twitter](#) to document limitations of bias bounties, critiquing their ownership, incentives, accessibility, and efficacy as an audit mechanism. [Full Paper](#) accepted at [AIES 2023](#).
- Conducted participatory design to launch a yearly [survey on queer experiences in AI](#), facilitating an intersectional understanding of barriers related to outness, social climates, harassment, and discrimination.

Research Associate

Hyderabad, India

PreCog, IIIT Hyderabad — Advisor: Prof. Ponnuram Kumaraguru

July 2021 - Aug 2022

- Led research collaborations across academia and nonprofits, wrote grant proposals and mentored students.
- Collaborated with [Digital Green](#) to understand the impact of content-specificity and knowledge-transfer within networks on the adoption of agricultural practices by farmers. [Full Paper](#) accepted at [ICTD 2022](#).
- Developed a taxonomy of dark patterns in install-incentivizing apps on Google Play which compromise sensitive data and incur financial loss to users. Configured an anomaly detection algorithm to detect lockstep behaviors exhibited by fraudulent reviews to boost app ratings in real-time. [Paper](#) accepted at [ACM Hypertext 2022](#), awarded **\$2100** in travel grant by [ACM SIGWEB](#), and [blog](#) featured in the [AI Ethics Brief](#).
- Received funding from Flipkart (largest Indian e-commerce service provider) for a grant proposal on creating an e-commerce credibility score against return-to-origin cancellations using publicly available information.

- Collaboratively Shaping Evaluation Processes for Queer AI Harms** [AIES '23](#)
Ashwin Singh, N Dennler, A Ovalle, L Soldaini, A Subramonian, H Tu, W Agnew, A Ghosh + 5 Montreal, Canada
- Queer In AI: A Case Study in Community-Led Participatory AI** [FAccT '23](#)
Ashwin Singh, Organizers of Queer In AI Chicago, USA
- Erasing Labor with Labor: Dark Patterns and Lockstep Behaviors on Google Play** [Hypertext '22](#)
Ashwin Singh, A Arun, P Malhotra, P Desur, A Jain, DH Chau, P Kumaraguru Barcelona, Spain
- Diagnosing Data from ICTs to Provide Focused Assistance in Agricultural Adoptions** [ICTD '22](#)
Ashwin Singh, M Subramanian, A Agarwal, P Priyadarshi, S Gupta, K Garimella, P Kumaraguru +5 Seattle, USA

TEACHING

Practices Instructor [UPF Barcelona](#)
26518-T1: Fairness, Accountability, Transparency & Ethics in Data Processing January 2025 - Present

Course Instructor: Prof. Carlos Castillo

Teaching labs on satisfiability of anonymity criteria, discrimination discovery, and fairness-aware modeling for regression and classification tasks, to final-year computer science students [[Github](#)].

Head Teaching Assistant [IIIT Delhi](#)
CSE648: Privacy and Security in Online Social Media January 2021 - May 2021

Course Instructor: Prof. Ponnurangam Kumaraguru

Designed coursework, homeworks and exams involving data collection (web and social media) and analysis (ML, NLP and Graphs). Led eight teaching assistants in a class of 250+ junior, senior and graduate students.

Teaching Assistant [IIIT Delhi](#)
MTH201: Probability and Statistics January 2020 - May 2020

Course Instructor: Prof. Acushla Saraswat

Conducted tutorials, graded student submissions and typeset class notes in LaTeX.

SKILLS

Methods: Clustering, Recommender Systems, Experiment Design, A/B Testing, Social Network Analysis, Anomaly Detection, Surveys, Participatory Design


Tools & Technologies: Github, MongoDB, SQL/BigQuery, Gephi, Plotly, seaborn, numpy, pandas, scikit-learn, pyTorch, SHAP, Looker, MixPanel, AirFlow, GCP, App Engine, GTM

Programming Languages: python, R, JAVA

Relevant Coursework: Critical Data Studies^{†,§}, Data Driven Social Analytics^{†,§}, Machine Learning[†], Web Intelligence^{†,§}, Natural Language Processing[†], Computational Semantics[†], Research Methods^{†,§}, Statistical Inference, Stochastic Processes and Applications, Probability and Statistics, Linear Optimization
(§ = **Matrícula de honor**, † = **Graduate Courses**).

ACADEMIC SERVICE

Organizer [NeurIPS 2022, AAAI 2022, NeurIPS 2021](#)
Queer In AI Affinity Workshops

- Moderated a panel on caste in technological institutions that involved scholars and activists from backgrounds spanning anthropology, STS, policy, law and economics. ([Read Twitter Thread](#) )
- Hosted a talk on the inconsideration for queer and transgender identities in the digitization of criminal records in India and its implications for automated decision systems leveraging that data.

REFERENCES

- Dr. Carlos Castillo**, ICREA Research Professor, Universitat Pompeu Fabra, Barcelona: chato@icrea.cat
- Dr. Ponnurangam Kumaraguru**, Professor, IIIT Hyderabad: pk.guru@iiit.ac.in
- Dr. William Agnew**, CBI Postdoc Fellow at CMU and Organizer, Queer in AI: wagnew@andrew.cmu.edu