Siddharth D Jaiswal

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https://sidd0602.github.io/

EDUCATION

- **Indian Institute of Technology, Kharagpur, India** **Prime Minister's Research Fellowship Awardee**
  5th yr Ph.D in Computer Science and Engineering; GPA: 9.5/10   Jan. 2021 – Jan. 2026 (*expected*)

- **Indian Institute of Science, Bengaluru, India** **Microsoft Data Science Fellowship Awardee**
  Master of Technology(Research) in Computational & Data Science   Aug. 2017 – Jan. 2020

WORK EXPERIENCE

- **Josh Talks AI**
  Research Consultant
  * Consulted for a project on benchmarking of VLMs for Indian cultural artifacts.   May 2025 – June 2025
  * Consulted as an AI expert for an AI curriculum for middle-school children in India.   July 2025 – August 2025

- **AI Safety Asia & Cooperative AI Foundation**
  Group Facilitator; Online course on CAI–Asia Edition   March 2025 – May 2025
  * Facilitated group discussions, evaluated assignments and helped with the smooth conduct of the course.

- **Huawei Technologies India Pvt. Ltd., Bengaluru, Karnataka**
  Technical Project Leader; Cloud & AI Business Line   March 2020 – January 2021
  * Developed query optimization features for the OPENLOOKENG data virtualization engine (open-source).

COMPLETED & ONGOING RESEARCH

- **Ph.D Thesis**   Dept. of CSE, IIT, Kharagpur

  Audit and Mitigation of Social Biases in Human-Interfaced AI Systems   Jan. 2021 – Current

  * Audit and mitigation of intersectional bias in **Face Recognition Systems** under adversarial conditions through data-centric interventions.
  * Audit of bias in visual search for *non-binary individuals'* clothing on **e-commerce platforms**.
  * Audit and mitigation of bias in **text-based gender analyzers** through data-centric and model-centric interventions, focussing on *non-binary individuals'*.
  * Generation of synthetic diverse, realistic & privacy-preserving face datasets using **VLMs** and **T2I Diffusion models**.

- **M.Tech(Research) Thesis**   Dept. of CDS, IISc, Bengaluru
  Streaming Partitioning and Distributed Analytics on Large Graphs   Aug. 2017 – Jan. 2020

  * Developed topological-motif–based partitioning heuristics for large streaming graphs.
  * Developed a partition-centric distributed algorithm to identify the Eulerian circuit on large graphs.

PUBLICATIONS

- **Fairer Datasets for Advancing Responsible AI Systems**   AAAI/ACM AIES (SP) 2025
  Siddharth D Jaiswal

- **Exploring Disparity-Accuracy Trade-offs in Face Recognition Systems: The Role of Datasets, Architectures, and Loss Functions**   AAAI ICWSM 2025 [Proceeding]
  Siddharth D Jaiswal, S Basu, S Sikdar, A Mukherjee

- **Breaking the Global North Stereotype: A Global South-centric Benchmark Dataset for Auditing and Mitigating Biases in Facial Recognition Systems**   AAAI/ACM AIES 2024 [Proceeding]
  Siddharth D Jaiswal, A Ganai, A Dash, S Ghosh, A Mukherjee

- **Uncovering Gender Biases in Human-AI Platforms**   AAAI/ACM AIES (SP) 2024 [Proceeding]
  Siddharth D Jaiswal

- **Auditing Gender Analyzers on Text Data**   IEEE/ACM ASONAM 2023 [Proceeding]
  Siddharth D Jaiswal, AK Verma, A Mukherjee

- **A History of Diversity in the Web (Conference)**   ACM WebConference (Companion) 2023 [Proceeding]
  Siddharth D Jaiswal, A Mukherjee

- **Marching with the Pink Parade: Evaluating Visual Search Recommendations for Non-binary Clothing Items**   ACM CHI (Case Studies) 2022 [Proceeding]
  Siddharth D Jaiswal, A Mukherjee

- **Two-Face: Adversarial Audit of Commercial Face Recognition Systems**   AAAI ICWSM 2022 [Proceeding]
  Siddharth D Jaiswal, K Duggirala, A Dash, A Mukherjee

- **Triparts: Scalable Streaming Graph Partitioning to Enhance Community Structure** VLDB 2025 [Proceeding]
  R Bhoot, T Khare, M Agarwal, *Siddharth D Jaiswal*, Y Simmhan
- **DENOASR: Debiasing ASRs through Selective Denoising** IEEE ICKG 2024 [Proceeding]
  AK Rai, *Siddharth D Jaiswal*, S Prakash, BP Sree, A Mukherjee
- **A Deep Dive into the Disparity of Word Error Rates Across Thousands of NPTEL MOOC Videos**
  AK Rai, *Siddharth D Jaiswal*, A Mukherjee AAAI ICWSM 2024 [Proceeding]
- **Platform Governance: Past, Present and Future** ACM GetMobile: MCC 2022 [Journal]
  M Das, A Dash, *Siddharth D Jaiswal*, B Mathew, P Saha, A Mukerjee
- **A Partition-centric Distributed Algorithm for Identifying Euler Circuits in Large Graphs**
  Siddharth D Jaiswal, Yogesh Simmhan IEEE IPDPS-W 2019 [Proceeding]
- **"Haet Bhasha aur Diskrimineshun": Phonetic Perturbations in Code-Mixed Hinglish to Red-Team LLMs**
  D Aswal, *Siddharth D Jaiswal* [Arxiv]
- **Auditing the Grid-Based Placement of Private Label Products on E-commerce Search Result Pages**
  Siddharth D Jaiswal, A Dash, N Shroff, YB Vunnam, S Ghosh, A Mukherjee [Arxiv]
- **Mask-up: Investigating Biases in Face Re-identification for Masked Faces**
  Siddharth D Jaiswal, AK Verma, A Mukherjee [Arxiv]

RESEARCH INTERNSHIPS

- **Disparity-Accuracy Tradeoffs in Face Recognition Systems** L3S Research Centre, LUH, Germany
  August 2023 – November 2023
  * Large-scale audit to understand the dataset-loss-model combination that impacts accuracy and bias for binary gender classification in Face Recognition Systems.

- **Online Algorithms for Facility Location Problem** ACMU, Indian Statistical Institute, Kolkata
  June 2015 – July 2015
  * Development of an Online Algorithm for placing a new server amongst an existing configuration of servers and customers given certain constraints. A conjecture and an algorithm are suggested based on observations of some test cases.

- **Approximation Algorithms for DVRP on Trees** ACMU, Indian Statistical Institute, Kolkata
  December 2014
  * Development of an approximation bound for Distance Constrained Vehicle Routing Problem (DVRP) on Trees. Also proved that the Distance Constrained Vehicle Routing Problem on a Tree is NP Complete.

PROGRAMMING SKILLS

- **Languages**: Python, Java, C++ **Libraries**: Scikit-learn, Numpy, Pandas, Pytorch, Matplotlib, Selenium

VISITS, FELLOWSHIPS & AWARDS

Visits

- Presented posters at ACM India ARCS Symposium, 2025 (Coimbatore) and 2024 (Bhubaneswar)
- Presented a poster, "Audit & Mitigation of Gender Biases in Human-AI Platforms" at ICPR 2024 DC, India
- Attended the 1st ACM India Pingala Interactions in Computing 2024, Mysore, India
- Presented a poster, "Uncovering Biases in Face Recognition Systems" at ECAI 2023 Doctoral Symposium, Poland
- Attended the Mediterranean Machine Learning (M2L) Summer School, 2023, Thessaloniki, Greece
- Attended Indian Symposium on Machine Learning, 2022 (IIT Gandhinagar) and 2023 (IIT Bombay)
- Attended Google Research Week by Google Research India, 2023, Bengaluru, India
- Attended the AI Ethics and Governance (Turing Commons) Training by The Alan Turing Institute, 2022, Online
- Attended the 1st Greek ACM-W Chapter Winter School on Fairness in AI, 2022, Online
- Presented a poster, "STEM: STreaming Edge Partitioner based on Motifs" at the 2nd R-CCS International Symposium and the 4th R-CCS HPC Youth Workshop, 2020, RIKEN Centre for Computational Science, Kobe, Japan
- Presented a poster, "Incremental Algorithms for PageRank and k-core on Dynamic Graphs" at Student Research Symposium, HiPC 2017, Jaipur, India

Fellowships

- Awarded the Prime Minister's Research Fellowship (PMRF) [January 2022] by MoE, Govt. of India for PhD studies.
- Awarded the Microsoft Data Science Fellowship [August 2017] by Microsoft India for M.Tech(Research) studies.

Awards & Travel Grants

- Awarded AAAI AIES Travel Grant to attend AAAI/ACM AIES 2025 in Madrid, Spain
- Awarded the ACM India IARCS Travel Grant to attend AAAI ICWSM, 2025 in Copenhagen, Denmark
- Awarded the AAAI ICWSM-25 Student Travel Grant to attend AAAI ICWSM, 2025 in Copenhagen, Denmark
- Outstanding Poster at ICPR 2024 Doctoral Consortium
- Awarded AAAI AIES Travel Grant to attend AAAI/ACM AIES 2024 in San Jose, USA
- Awarded ACM India Travel Grant to attend ACM-I PIC 2024, ACM-I ARCS 2024 & ACM-I ARCS 2025
- Awarded IndoML Travel Grant to attend IndoML 2022 & 2023
- Awarded Google Research India Travel Grant to attend Google Research Week 2023
- Awarded the Microsoft Research India Travel Grant to attend the ACM WebConference, 2023 in Austin, USA
- Awarded the ACM India IARCS Travel Grant to attend the ACM WebConference, 2023 in Austin, USA
- Awarded the IEEE TCSS Travel Grant to attend IEEE IPDPS, 2019 in Rio de Janeiro, Brazil

TALKS

- Presentation on "Exploring Disparity-Accuracy Trade-offs in Face Recognition Systems: The Role of Datasets, Architectures, and Loss Functions" at 19th AAAI ICWSM, 2025, Copenhagen, Denmark
- Podcast (AI Truth Ethics Podcast) on "The Asimov Fallacy: Rethinking AI Ethics in a World of Inevitable Harm" with Alex Tsakiris. 2024
- Tutorial on "AI & Ethics" at 10th International Conference on Pattern Recognition and Machine Intelligence (PReMI) 2023, Kolkata, India
- Presentation on "A History of Diversity in The Web (Conference)" at 32nd ACM The Web Conference (History of the Web), 2023, Austin, USA
- Presentation on "Marching with the Pink Parade: Evaluating Visual Search Recommendations for Non-binary Clothing Items" at ACM CHI (Case Studies), 2022, Virtual
- Podcast (Panoptic Talks) on "Identifying the Bias in Facial Recognition Technology" with the Internet Freedom Foundation, India. 2021

EXTRACURRICULAR ACTIVITIES & SERVICE

- Reviewer– AAAI (2026), AAAI ICWSM (2026), AAAI/ACM AIES (2025, 2024), ACM MM (2025), IJCAI(2025), ACM CSCW (2024, 2023), ACM TheWebConference (2024)
- Teaching Assistant(Jan-Apr 2025), CS21004: Formal Language and Automata Theory, Dept. of CSE, IIT, Kharagpur
- Teaching Assistant(Aug-Nov 2024), CS60092: Information Retrieval, Dept. of CSE, IIT, Kharagpur
- Teaching Assistant(Jan-Apr 2024), CS21004: Formal Language and Automata Theory, Dept. of CSE, IIT, Kharagpur
- Teaching Assistant(Jan-Apr 2023), CS60016: AI & Ethics, Dept. of CSE, IIT, Kharagpur
- Teaching Assistant(Nov 2022-Jan 2023), CS10003: Programming and Data Structures, Dept. of CSE, IIT, Kharagpur
- Teaching Assistant(Jan-Apr 2022), CS60016: AI & Ethics, Dept. of CSE, IIT, Kharagpur
- Teaching Assistant(Aug-Nov 2021), CS29003: Algorithms Lab, Dept. of CSE, IIT, Kharagpur
- Teaching Assistant(Mar-June 2021), CS19003: Programming and Data Structures Lab, Dept. of CSE, IIT, Kharagpur
- Teaching Assistant(Aug-Dec 2019), DS221: Introduction to Scalable Systems, Dept. of CDS, IISc, Bengaluru
- Student Volunteer- ACM FAccT (2021, 2022), ACM CSCW (2021, 2022), NeurIPS 2021, WWW 2022
- Student General Secretary, IEEE Student Branch Chapter, Tezpur Central University
- Organizer of TEDxTezpurUniversity held in April, 2014.

I declare that all the information provided above is true to my knowledge. References can be provided on request.