

## EDUCATION

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- **Indian Institute of Technology, Kharagpur, India** Prime Minister's Research Fellowship Awardee  
3rd 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
- **Tezpur Central University, Tezpur, India**  
Bachelor of Technology in Computer Science & Engineering Aug. 2012 – June. 2016

## WORK EXPERIENCE

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- **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 PROJECTS

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- **Ph.D Thesis** Dept. of CSE, IIT, Kharagpur  
Evaluation of Bias in various Human-AI Systems against minority stakeholders Jan. 2021 – Current
  - \* Evaluation of intersectional bias in Face Recognition Systems under adversarial conditions.
  - \* Evaluation of bias in visual search by e-commerce platforms for non-binary clothing.
  - \* Development of benchmark face datasets.
  - \* Development of bias mitigation strategies for Face Recognition Systems.
- **M.Tech(Research) Thesis** Dept. of CDS, IISc, Bengaluru  
Streaming Partitioning and Distributed Analytics on Large Graphs Aug. 2017 – Jan. 2020
  - \* Developed partitioning heuristics for large streaming graphs with over 130M edges using topological motifs which perform 9X better than the baseline strategies.
  - \* Developed a partition-centric distributed algorithm to identify the Eulerian circuit on large graphs with over 500M edges.
- **Course Mini Projects**
  - Delayed Impacts of the Gender Shades Project Dept. of CSE, IIT, Kharagpur
    - \* Evaluation of Intersectional Bias across ethnicity, gender, age and other dimensions in commercial Face Detection APIs over multiple face image datasets.
  - Development of a miniature Inception network Dept. of CSE, IIT, Kharagpur
    - \* Development, training and evaluation of accuracy for a small inception network for the CIFAR-10 Image dataset.
  - Vertex-Centric Path Identification Algorithm Dept. of CDS, IISc, Bengaluru
    - \* Development of a vertex-centric variant of Minimal On-Road Time Route Scheduling algorithm on Time-Dependent Graphs and implementation on Apache Giraph.

## PUBLICATIONS

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- **Uncovering Biases in Face Recognition Systems**  
Upcoming Publication at ECAI 2023 (Doctoral Consortium) Krakow, Poland
- **A Deep Dive into the Disparity of Word Error Rates Across Thousands of NPTEL MOOC Videos**  
Upcoming Publication at AAAI ICWSM 2024 Buffalo, USA
- **A History of Diversity in the Web (Conference)**  
Published at The ACM WebConference 2023 (Companion Proceedings) Austin, USA
- **Marching with the Pink Parade: Evaluating Visual Search Recommendations for Non-binary Clothing Items**  
Published at ACM CHI 2022 (Case Studies) New Orleans, USA & Hybrid
- **Two-Face: Adversarial Audit of Commercial Face Recognition Systems**  
Published at AAAI ICWSM 2022 Atlanta, USA & Hybrid
- **Platform Governance: Past, Present and Future**  
Published in GetMobile: Mobile Computing and Communications 26 (1) 2022
- **A Partition-centric Distributed Algorithm for Identifying Euler Circuits in Large Graphs**  
Published at HPBDC 2019, co-located with IPDPS 2019 Rio de Janeiro, Brazil

## RELEVANT COURSEWORK

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### Indian Institute of Technology

- AI & Ethics
- Deep Learning
- High Performance Scientific Computing

### Indian Institute of Science

- Scalable Systems for Data Science
- Game Theory
- Introduction to Scalable Systems

## PROGRAMMING SKILLS

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• **Languages:** Python, Java, C++

**Libraries:** Scikit-learn, Numpy, Scipy, Pytorch, Matplotlib

## RESEARCH INTERNSHIPS

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- **Bias Mitigation & Explainability Strategies in Face Recognition** L3S Research Centre, LUH, Germany  
August 2023 – Present
- **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 on trees. Also proved that the Distance Constrained Vehicle Routing Problem on a Tree is NP Complete.

## ACHIEVEMENTS AND FELLOWSHIP

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- Attended the Mediterranean Machine Learning Summer School, 2023, Thessaloniki, Greece
- 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
- Awarded the Prime Minister's Research Fellowship (PMRF) by Ministry of Education, Govt. of India, for the duration of Doctoral Studies in December 2021 selection cycle
- Attended the 1st Greek ACM-W Chapter Winter School on Fairness in AI, 2022, Online
- Presented a poster, "STEM: STrimming 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
- Awarded the Microsoft Data Science Fellowship 2017 by Microsoft India, for the duration of 2017-19 instituted at Dept. of CDS, IISc, Bengaluru

## EXTRACURRICULAR ACTIVITIES & SERVICE

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- Reviewer, CSCW 2023
- 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.