

Asoke Datta

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EDUCATION

2018 – Ongoing – **PhD student in Computer Science**, University of California, Merced
2010 – 2014 **BSc in Computer Science and Engineering**, Leading University, Sylhet




PROFESSIONAL APPOINTMENTS



2018 – present **Graduate Research Assistant**
Department of Electrical Engineering and Computer Science
School of Engineering
University of California, Merced
2018 – 2020 **Graduate Teaching Assistant**
Department of Electrical Engineering and Computer Science
School of Engineering
University of California, Merced
2014 – 2017 **System Engineer**
Accenture
Dhaka, Bangladesh

AWARDS & HONORS

2019-2021 Bobcat Summer Fellowship
2016 Accenture, Bangladesh - Star Performer Award (November)

PUBLICATIONS

2021 Y. Izenov, **A. Datta**, J. H. Shin, F. Rusu. Online Sketch-based Query Optimization.
• Preprint:  arxiv.org/abs/2102.02440.
• Code:  [yizenov/compass_query_optimizer](https://github.com/yizenov/compass_query_optimizer)
2021 Y. Izenov, **A. Datta**, J. H. Shin, F. Rusu. COMPASS: Online Sketch-based Query Optimization for In-Memory Databases. *SIGMOD/PODS '21: Proceedings of the 2021 International Conference on Management of Data*.
• DOI: dl.acm.org/doi/abs/10.1145/3448016.3452840.
• Code:  [yizenov/compass_query_optimizer](https://github.com/yizenov/compass_query_optimizer)

- 2021 **A. Datta**, Y. Izenov, B. Tsan, F. Rusu. Simpli-Squared: A Very Simple Yet Unexpectedly Powerful Join Ordering Algorithm Without Cardinality Estimates.
- Preprint:  arxiv.org/abs/2111.00163.
 - Code:  [Asoke26/Simpli-Squared.git](https://github.com/Asoke26/Simpli-Squared.git)

TEACHING

- 2018 – 2020 CSE111: Database Systems
Mentor and evaluate performance of a group of 60 students.
University of California, Merced

PRESENTATIONS

- 2019 Y. Izenov, **A. Datta**. Sketch-based Join Order Selection for In-Memory Database Systems, *Northern California Database Meetup; 2019*, San Francisco, California.
- 2020 **A. Datta**. Research Opportunity in Computer Science and Path to higher study, *IEEE Leading University Student Branch*, Leading University, Sylhet, Bangladesh.
- **Invited talk**
 - Website: events.vtools.ieee.org/m/238520
- 2021 **A. Datta**. Join ordering- Without statistics, *EECS seminar series Fall 21*, University of California, Merced.
- Website: events.ucmerced.edu/event/fall_2021_electrical_engineering_and_computer_science_e

ACADEMIC SERVICE & AFFILIATIONS






REVIEWER

- 2021 ACM SIGMOD/PODS International Conference on Management of Data
- 2020 33rd International Conference on Scientific and Statistical Database Management
- 2020 IEEE International Conference on Big Data
- 2020 14TH ACM International Conference on Distributed and Event-Based Systems
- 2019 32nd International Conference on Scientific and Statistical Database Management

AFFILIATIONS

- 2019 – present ACM Student Chapter
- 2010 – 2014 Member - Leading University Programming Club
- 2007 – 2009 Member - Bangladesh National Cadet Corps(BNCC)

PROJECTS

- 2021 Cardinality Estimation [Course : Big Data]
Estimating Cardinality of a database query using sampling, histogram, sketches and machine learning model.
• Code:  [Asoke26/Tracking-Misplaced-Item-in-Autonomous-RetailStore](#)
- 2020 Autonomous Retail [Course : Computer Vision, Adv. Topics in Intelligent System]
Tracking misplaced items in an autonomous Retail store which includes a) Event Detection
b) Object Recognition.
• Code:  [Asoke26/Tracking-Misplaced-Item-in-Autonomous-RetailStore](#)
- 2019 Database Implementation [Course : Database System Implementation]
Implement relational database major components includes a) Catalog, b) Query Optimizer,
c) Data Loader, and d) Execution Engine.
• Code:  [Asoke26/Database_Implementation](#)
- 2019 Baseball Elimination [Course : Advance Algorithm]
Find which teams have a chance to win Baseball league using MaxFlow Mincut Algorithm.
• Code:  [Asoke26/Baseball-Elimination](#)
- 2019 SOFC Approximation [Course : Parallel Computing]
Approximate and optimize Solid Oxide Fuel Cell simulation using ML model and parallelize
model training using GPU.
• Code:  [Asoke26/OpenFuelCell](#)