

Sakshi Sharma

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EDUCATION

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| Boston University Boston, MA | Sep 2025 - Present |
| PhD in Computer Science | |
| Advisor: PhD. Vasiliki Kalavri, John Liagouris | |
| Boston University Boston, MA | Sep 2022 - May 2024 |
| Master of Science Degree in Computer Science : CGPA - 3.9/4 | |
| International Institute of Information Technology Bhubaneswar, India | Aug 2017 - May 2021 |
| Bachelor Degree in Computer Science Engineering : CGPA - 8.6/10 | |
| Relevant Coursework | |
| Streaming Systems, Advanced Databases, Distributed Systems, Programming Language Foundations for Concurrency | |

PUBLICATIONS

D. Sondhi, M. Jobanputra, D. Rani, S. Purandare, **S. Sharma** and R. Purandare, "Mining Similar Methods for Test Adaptation", *IEEE Transaction on Software Engineering*, doi: 10.1109/TSE.2021.3057163. [Link](#)

PROJECTS

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|---|-----------------------------------|
| A Disaggregated Stream Processing System for Heterogeneous Environments | Boston University |
| Developing a fully-disaggregated design for data stream processing system that decouples core data-plane and control-plane services, enabling nonblocking online reconfiguration without pausing the computation. | |
| Dynamic Parameter Optimization for LSM-Based Databases | Masters Thesis, Boston University |
| Developing a dynamic parameter optimization framework for LSM-based databases in C++, with a focus on identifying essential parameters and dynamically tuning them based on workload variations to achieve significant performance improvements. Link | |
| Addressing transient workload spikes with Cloud bursting in Apache Flink | Boston University |
| Developing an adaptive Flink application in Java to leverage cloud bursting technique as an alternative to back-pressure. Link | |
| Enhancing Raft consensus algorithm to tolerate partial network connectivity | Boston University |
| Enhancing Raft consensus algorithm to tolerate partial network failures by incorporating ballot leader election and quorum connectivity features in Go Link | |

WORK EXPERIENCE

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| Institute for Global Sustainability Boston,MA | |
| Software Development Engineer Intern | May 2023 - May 2024 |
| Designed a scalable MongoDB database for the Corporate Carbon Risk project and deployed Flask APIs on Amazon EC2 to automate real-time data collection, enhancing scalability. | |
| BNY Mellon Pune,India | |
| Software Development Engineer | Feb 2021 - Aug 2022 |
| Detected and fixed a load balancing bug for 10 microservices, reducing API latency from 400 ms to 10 ms, and played a key role in migrating 6 Spring Boot microservices to a Uniform Product URL, ensuring seamless functionality. | |
| Dell Technologies Hyderabad, India | |
| Software Development Engineer Intern | May 2020 - July 2020 |
| Automated testing in Spring Boot, replicating complex configurations and mocking artifacts in Dell IT systems, reducing development time by 20%. | |
| IIT Delhi Delhi, India | |
| Research Intern | May 2019 - Aug 2019 |
| Developed an NLP model and a test mining tool, revealing 67 inter-language defects across 12 GitHub libraries by detecting functionally similar code in Java and Python. | |
| IIT Naya Raipur Raipur, India | |
| Research Intern | May 2018 - Aug 2018 |
| Developed a 6LoWPAN-based mine monitoring system using CC2420 TelosB motes and Contiki OS, enabling hazard prediction and IPv6 communication in coal mines. | |