Akshay Mehta
Curriculum Vitae
akshay_mehta@brown.edu

Education

Brown University, Aug 2022 – May 2026

Sc.B Applied Mathematics–Computer Science, GPA 3.83/4.00

Research Interests

AI-Augmented Database Management Systems, Integrity constraints for LLM-centric data processing, and General Computer Systems

Research Experience

Brown University, Computer Science Department
Advisor: Uğur Çetintemel
Research on grounding constraints, measuring latency of enforcement mechanisms, engineering new innovative enforcement mechanisms, and implementing this into a constraint store for Uğur's Vectraflow DBMS project.

Advisor: Nikos Vasilakis
Engineer a performance interface system for data parallel processing systems, called O+, which provides accurate time estimations for POSIX shell scripts, finding optimal parallelism configurations through a dynamic prediction engine.

Publications and Preprints

[1] Alexander W. Lee, Justin Chan, Michael Fu, Nicolas Kim, **Akshay Mehta**, Deepti Raghavan, and Ugur Cetintemel. "Semantic Integrity Constraints: Declarative Guardrails for AIAugmented Data Processing Systems". In: Proceedings of the VLDB Endowment. Vol. 18. 11. VLDB Endowment, 2025, pp. 4073–4080. DOI: 10.14778/3749646.3749677

Fellowships and Awards

Spring 2025: SPRINT/UTRA Fellowship - Worked on Impact Afghanistan's database, which hosts 100+ research entries focusing on women's rights and conditions post-2021

Teaching Experience

Fall 2025	Head Teaching Assistant - CSCI0300 Introduction to Computer Systems
Summer 2025	Teaching Assistant Brown Precollege - CECS0938 Decision Making & Problem Solving with Multi-Agent AI Systems
Spring 2025	Teaching Assistant - CSCI0300 Introduction to Computer Systems