

NIKHIL P SAMBHUS

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EDUCATION

MASc (thesis) in Computer Engineering
University of Toronto, Canada (Advisor - Prof. Ashvin Goel)

(September 2018 onward)

B-Tech in Computer Engineering
College of Engineering, Pune (COEP), Pune, India

(July 2011 to June 2015)

ACADEMIC EXPERIENCE

Leveraging determinism and NVM in main memory databases to reduce
DRAM footprint (at University of Toronto) *(May
2019 onward)*

- Goal is to reduce DRAM footprint of Felis (in house database) by leveraging cheaper but slower Non volatile memory (NVM) storage and deterministic execution to provide lower operating costs
- Studied performance and DRAM usage by placing different data objects on Intel's 3D Xpoint NVM to understand bottlenecks
- Preliminary implementation and evaluation of ideas such as buffering in DRAM and write back during garbage collection on NVM

TA Operating Systems ECE 344 (at University of Toronto) *(Fall 2018)*

- Assisted students in lab assignments
- Marked Midterm and final exam papers

Analyzing the Fragmented Log-Structured Merge data structure (remote
internship@UT Austin) *(October 2017 to November 2017)*

- Performed theoretical analysis of a recent novel data structure called Fragmented Log- Structured Merge (FLSM).
- Explored effect of different configurable parameters such as guard size, number of *sstables* per level, size of levels on the read and write performance in FLSM based key-value store.
- Compared FLSM with other data-structures such as Log Structure Merge (LSM), Be-Tree and B-Tree.