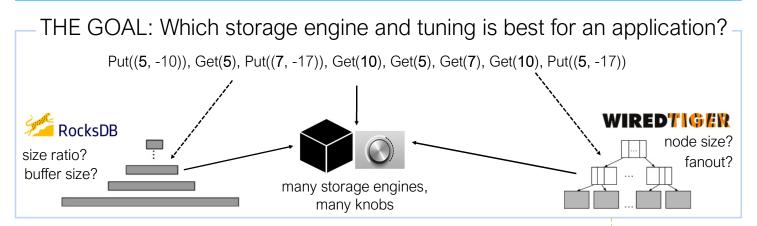


Probability

Access pattern

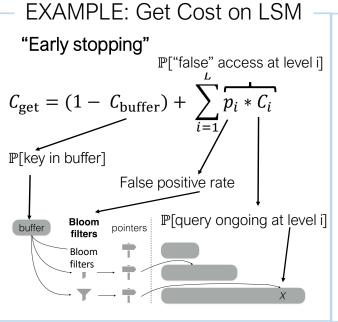
## From Worst-Case to Average-Case Analysis: Accurate Latency Predictions for Key-Value Storage Engines

Meena Jagadeesan and Garrett Tanzer | Advised by Subarna Chatterjee, Stratos Idreos

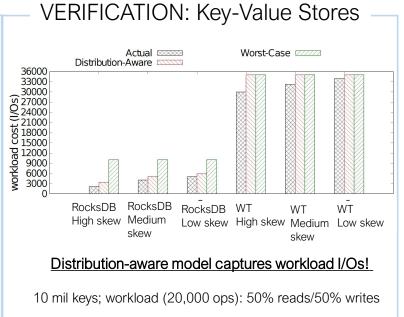


## AVERAGE-CASE ANALYSIS: A Distribution-Aware Framework Workload Feature Vector Storage Engine Unified Distributions Operations Configuration get engine = RocksDB Frequency Workload size ratio = 10 Distribution-I/Os range put buffer size = 1GB **Aware Cost**

filter memory = 2GB



Operation type



Model

USE CASES: How can these models be utilized?



(\$\frac{1}{4}\)





Compare designs

Automate selection

Search design space

**Create** self-designing storage engine



