PISketch: Finding Persistent and Infrequent Flows (Supplementary Material)

April 28, 2023

A   Main Parameter Configurations

A.1   PISketch

Memory Allocation: 10% memory for Bloom filter (with 3 hash functions), and 90% memory for the Weight sketch.

Main Parameter Settings: (1) Defaults: $L = 10$, $V = 1000$, $\mathcal{T} = 3000$; (2) The optimal parameters in Section 5.3/V.C: $p = 5$, $N_{Total} = 5e6$.

A.2   Sol-1: On-Off + CM sketch

Memory Allocation: 10% memory for On-Off, and 90% memory for CM sketch.

Main Parameter Settings: For On-Off, we set the number of arrays to 3 ($d = 3$), and the number of key-value pairs in a bucket to 8 ($w = 8$). For the CM sketch, we set the number of arrays to 3.

A.3   Sol-2: PIE + CM sketch

Memory Allocation: 1% memory for CM sketch, and 99% memory for PIE.

Main Parameter Settings: Since PIE needs to maintain a Space-Time Bloom filter for every period, we use Q times the default memory for PIE, where Q denotes the number of periods. In all our experiments, we set $Q = 1000$. For the CM sketch, we set the number of arrays to 3. We first assign memory to PIE and then allocate the remaining memory to the CM sketch.