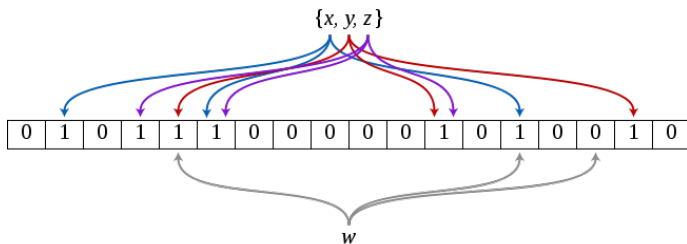# A Bloom Filter Implementation in Sage

John MacKinnon

University of Washington
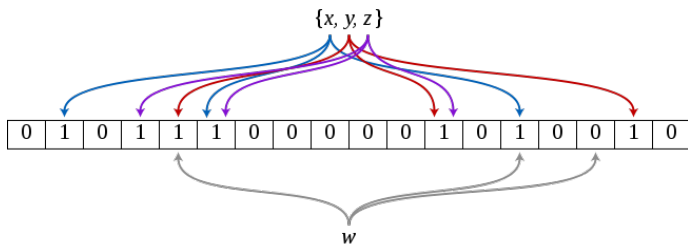
June 2, 2014

What is a BloomFilter
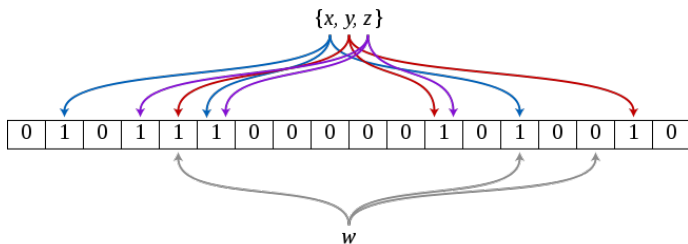

- space-efficient set

- space-efficient set
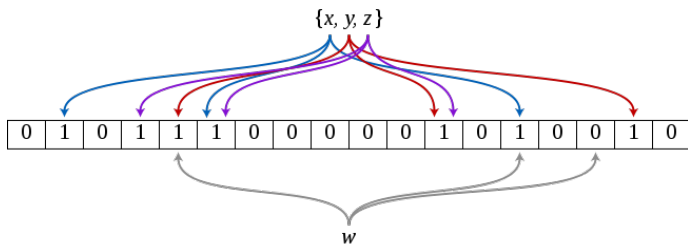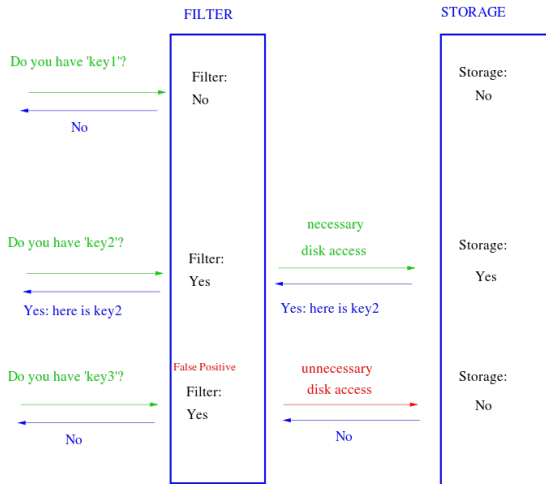 - members not stored

- space-efficient set
  - members not stored
- false positives

- space-efficient set
    - members not stored
- false positives
- probabilistic data structure

Uses for BloomFilters

Implementation in Sage

- adding
- membership testing
- false positive rate
- optimizing parameters

Filefilter