CS344: HW5

November 13, 2017

- Out Nov 13, Due week of Nov 20. Hand it to your TAs at the beginning of the recitation. No late homeworks please.
- Design a variant of Bloom filters for
  - inserting intervals $I \in [1, U]$ into set S (initially empty) and
  - asking membership queries if $I \in S$?
- Design a variant of Count-Min sketch for
  - increment frequency of i, $F[i]++$.
  - query rangesum $[i, j]$ and return $\sum_{k=i}^{k=j} F[k]$.
  - provide space, time, accuracy guarantees.