wuyichen24 Update Build_Recommendation_System.md History

1 contributor

28 lines (25 sloc) | 1.1 KB

Build Recommendation System

Requirements clarification

- **Functional requirements**
  - Get the top N trending topics for a user over the past X days.
  - The popularity of a topic can be determined by the frequency of the topic being viewed in the past.
- **Non-functional requirements**
  - Low latency.
  - High availability.
  - High consistency is desirable (eventual consistency).

Detailed Design

- Track topics
  - Log the view history into application service
  - A background async process with read the data from these logs, do some initial aggregation.
- 2 Solutions for generating top N trending topics

- Fast path
  - A data structure called Count-Min Sketch will be used.
    - 2D array
      - Rows are mapped to different hash functions.
      - Column are mapped to the Top N.
  - Take short time but less accurate.
- Slow path
  - MapReduce pipeline
  - Take long time but more accurate.

High-level design