

# SUMMARY OF ALGORITHM

- ▶ Popularity: not just hot
- ▶ Collaborative Filtering
  - Memory Based / Neighbourhood Based: User-based x Item-based (kNN)
  - Model Based:
    - ◎ Association Rule: Apriori, **FP-Growth\***
    - ◎ **SVD/SVD++\***, Factorization Machine (**ALS\***, SGD, MCMC)[libFM]: Matrix Decomposition
    - ◎ Clustering\*: User-based x Item-based
    - ◎ Classification\*/Regression Model\*: purchase/visit as Y
    - ◎ LSA / pLSA / LDA: vectorize items
    - ◎ Restricted Boltzmann Machine (RBM): 2-layer neural network
    - ◎ Graph-based algorithm
- ▶ Content-based / Knowledge-based
  - Item Attribute Vector x User Profile Vector
  - Distance Measurement `Cosine`
- ▶ Context-aware: when, where, mood

\*: implemented in Apache Spark

# IMPLICIT / EXPLICIT

- ▶ Explicit Feedback: user explicitly expresses like/dislike, e.g. rating, like
- ▶ Implicit Feedback: Not as obvious in terms of preference, it's only the observation, e.g. purchase, hits