

# Real-Rec: A real-time threads recommendation system

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Real-Rec is a system project designed for a forum recommendation solution, focusing primarily on real-time content delivery and related recommendation logic, rather than front-end or back-end implementation details.

## Overall goals

- Deliver highly relevant, high-quality post recommendations.
- Provide suitable content feeds when users browse or refresh, and personalized results when they explicitly search.
- Handle a continuous influx of new users and new posts, ensuring effective "cold start" strategies for both.

## Data Layer

### User portrait

- Basic info
- Preferences extraction
- Behavior modeling: browser history, like, favor, comment(depends on actual function scale)
- User search info

### Content portrait

- Textual attributes (title, body)
- Topic/Tag metadata (manually assigned or inferred via NLP)
- Time-based features (publish time, freshness)
- Engagement signals (views, likes, favorites, comments, shares)

### Contextual info

Access time (peak/off-peak times, weekdays/weekends)

## Algorithm layer

Recall

Filtering

Ranking

Cold start strategy

Diversity and Novelty

## Tech Stack

real-time data processing

real-time inference

off-line training

Filtering framework

Search framework

Data storage

Other

System security

CI/CD

Recovery