

Recommendation System based on user real-time behaviors

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Agenda

1. Get to know each other
2. What is RecSys?
3. User interaction signals
4. Session-based Recommendation Model
5. Demo
6. Lab

About me

- Sr. Data Scientist @ Grab
- 8 years of experience in ML
- #RecSys, #Search, #LLM
- <https://sg.linkedin.com/in/dvquy>

About you?



QR Code



Scan with mobile device



<https://rt-survey.dvquys.com/s...>

Recommender System



recommend something to somebody based on
what we understand about them

set of technologies,
algorithms and processes

Goals of RecSys

From user perspective:


- Help user discover contents they didn't know exist
- Save user's time by providing shortcuts

From business perspective:


- Provide a feel of "we understand you" for users
- Increase revenue by providing cross-sale opportunities

Example applications: Amazon

Added to cart


✓ 

\$209.99

Continue shopping 

Cart Subtotal (1 item): **\$209.99**

Go to Cart




Get free protection, delivery, standard installation, & haul-away.


Join Best Buy Totaltech™ & you get it all – plus a lot more!

If you already have a protection plan in your cart, it will be replaced with the plan for Totaltech members. [Learn more about Totaltech](#)

\$199.99 per year

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Frequently bought together (20 Items)




Rocketfish™ - Universal Soundbar Mounting Bracket

★★★★☆ (1,093)

\$54.99


 **Add to Cart**




Samsung - 2.0-Channel Wireless Rear Speaker Kit

★★★★☆ (74)

\$89.99
Save \$30


 **Add to Cart**




Rocketfish™ - 4' 4K UltraHD/HDR In-Wall Cable

★★★★☆ (38,700)

\$29.99


 **Add to Cart**



Samsung - 2.0.2-Channel Wireless Rear Speaker Kit

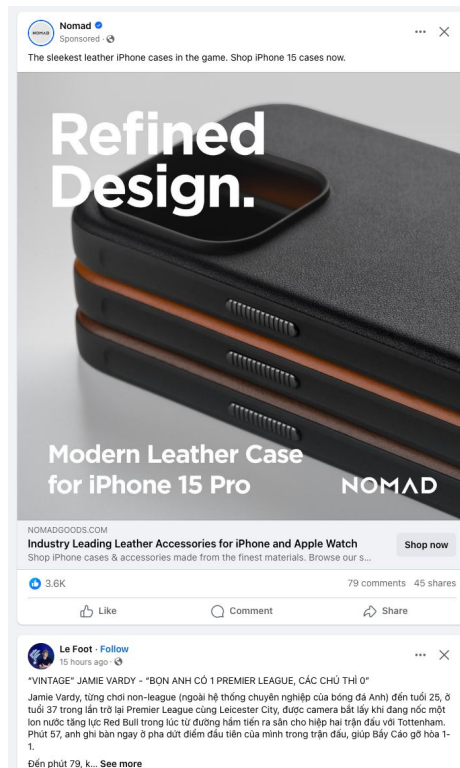
★★★★☆ (42)

\$299.99

 **Add to Cart**

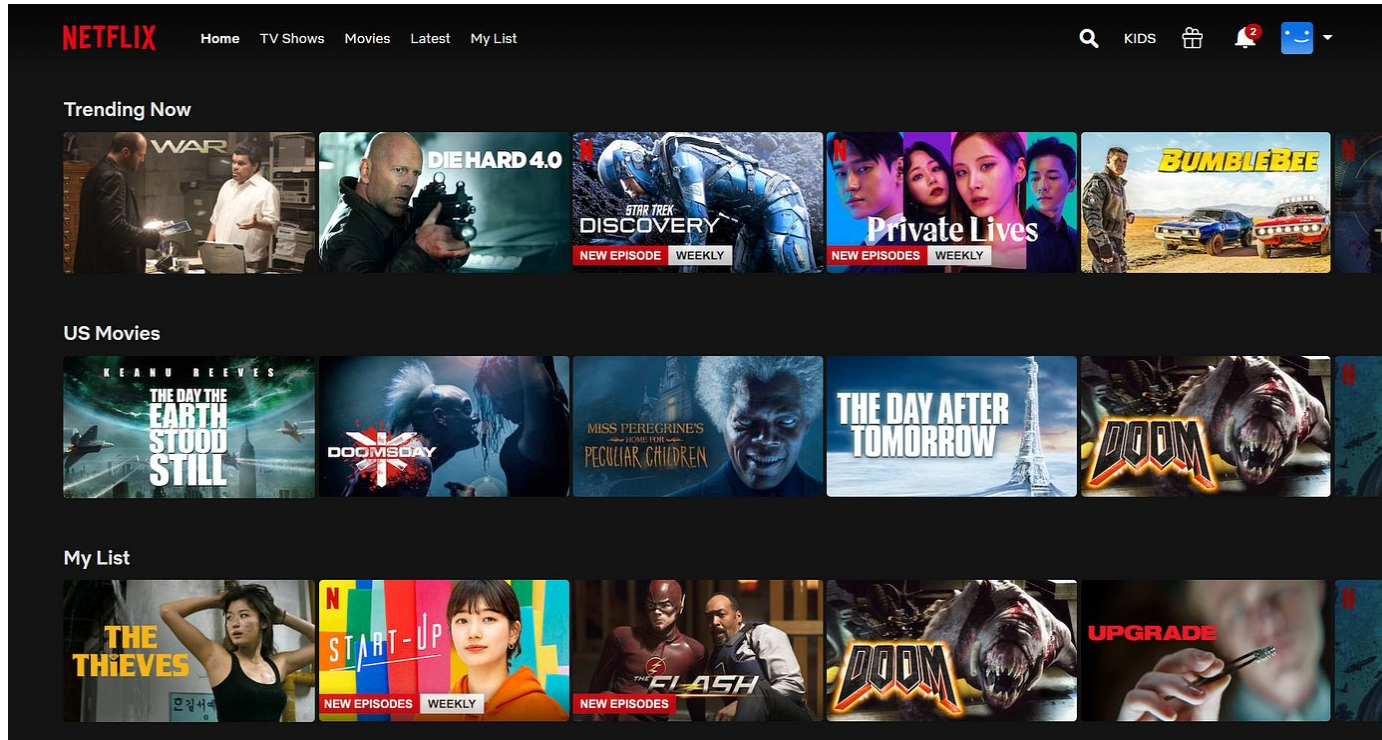
Source: [Drip.com](https://drip.com)

Example applications: Facebook



Source: Private

Example applications: Netflix



Source: [Medium Post Netflix and The Recommendation System](#)

Why is RecSys important?

35% of Amazon sales¹

75% of Netflix watches¹

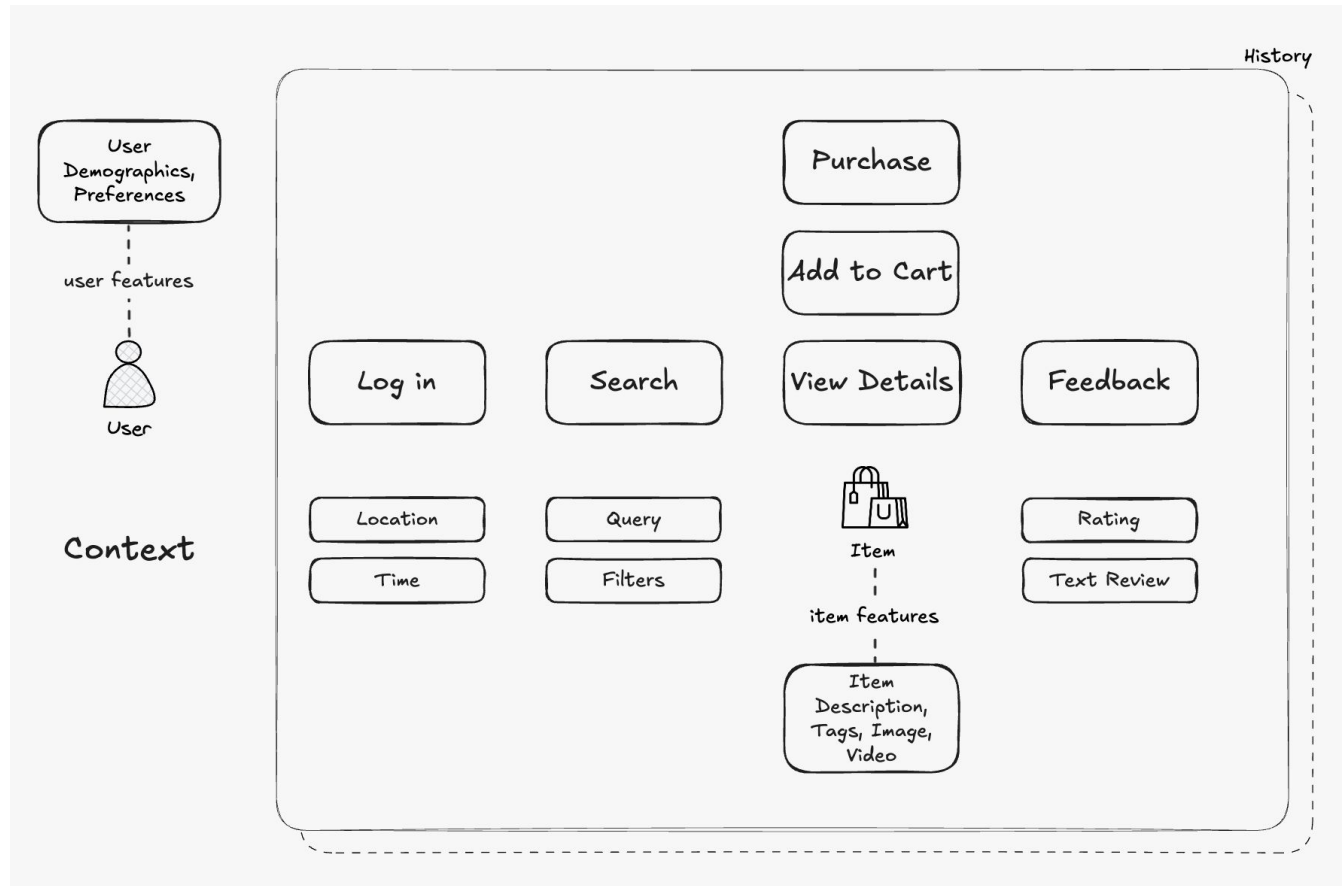
\$1B / year saved for Netflix²

1. [McKinsey](#)

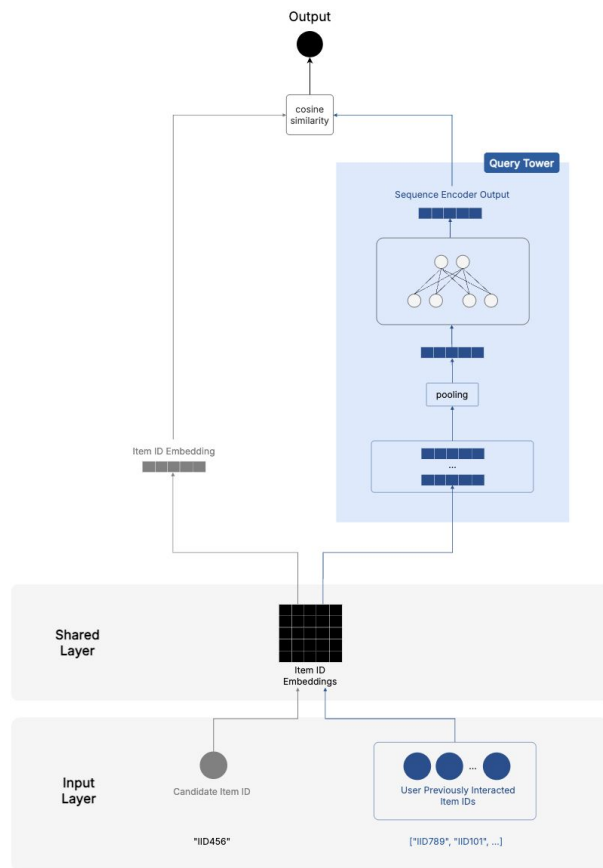
2. [The Netflix Recommender System: Algorithms, Business Value, and Innovation](#)

Session-based RecSys

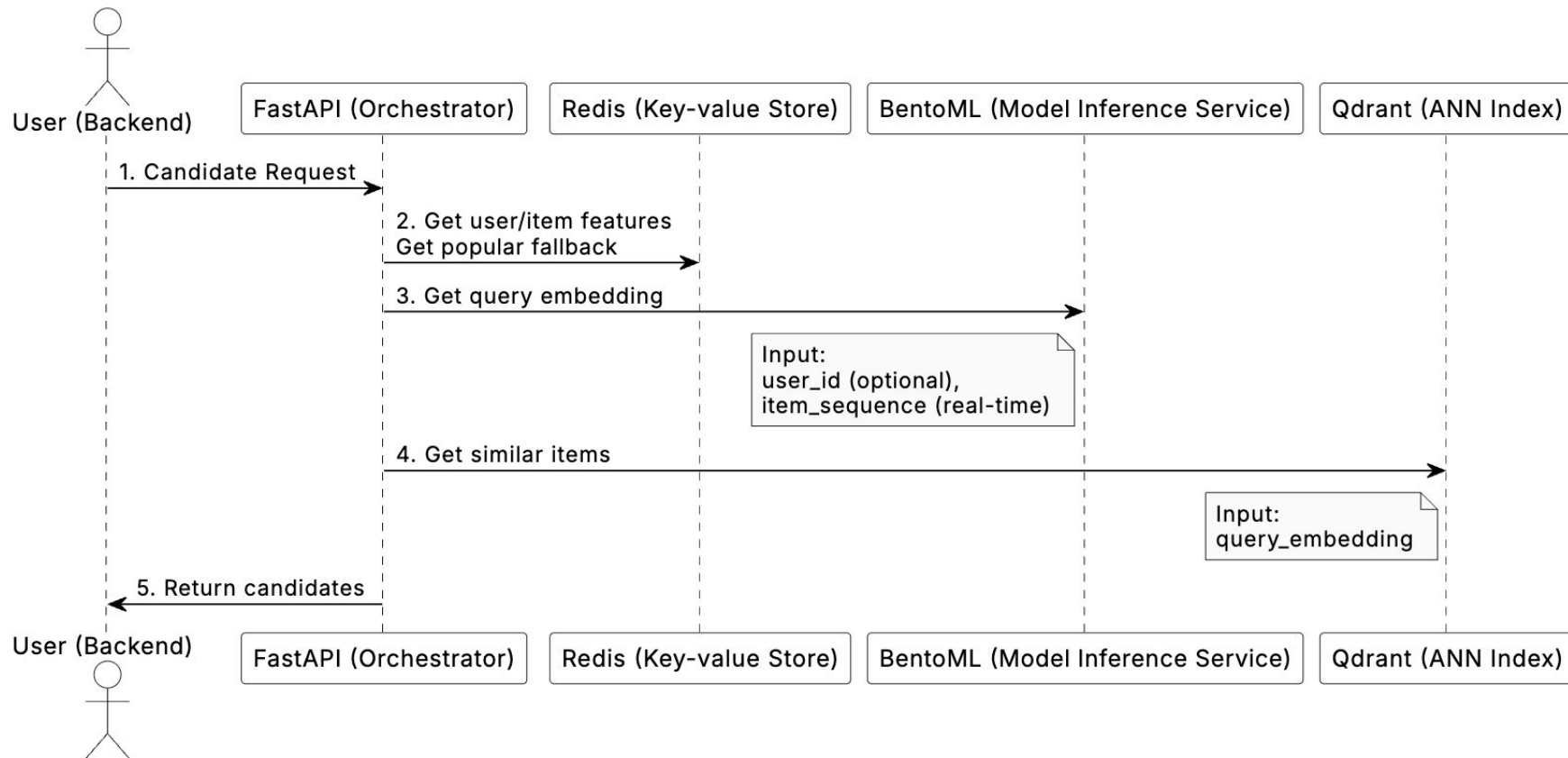
User Interaction Signals



Session-based (Sequential) Retriever



Retriever Serving



Demo

Home

🔍 Search books...

User Lookup

Enter a user ID to fetch their recommendations

User ID

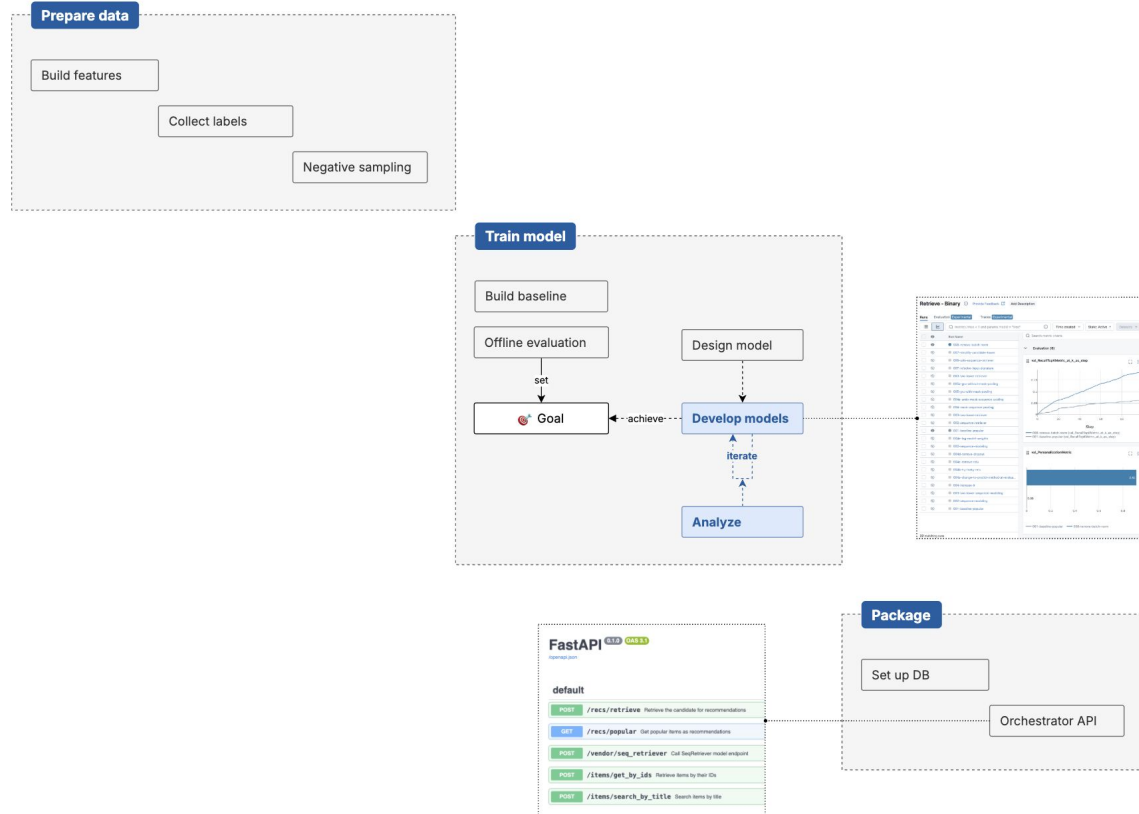
Enter user ID (optional)

Submit



Development Roadmap (Lab)

<https://github.com/dvquy13/recsys-seq-model>



Thank you!