



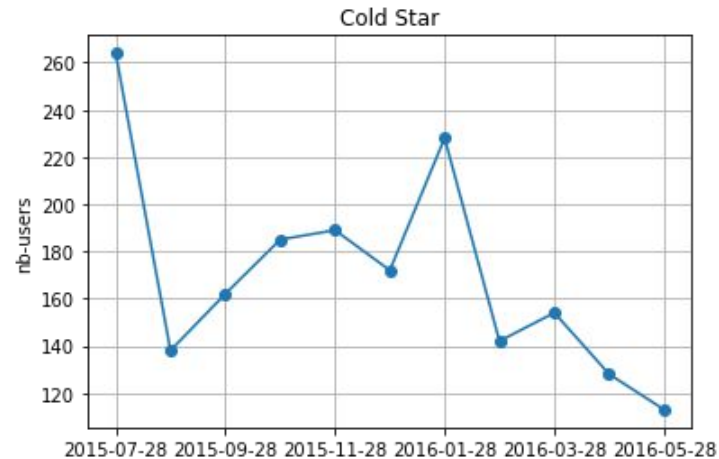
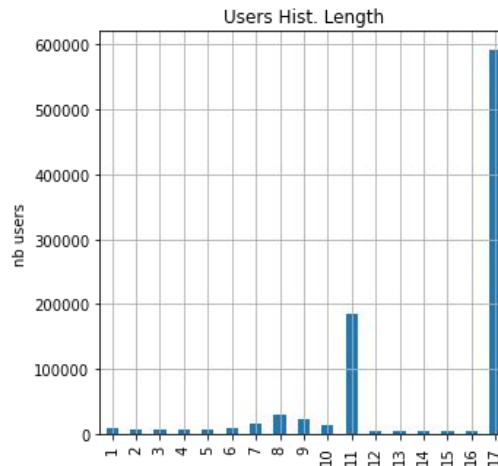
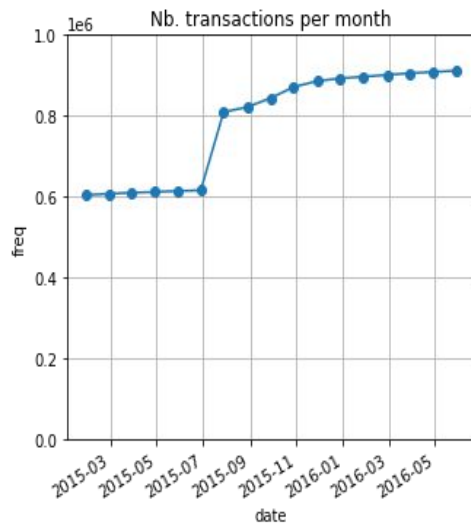
# RecSys Challenge

Luis Raúl Sánchez Vázquez



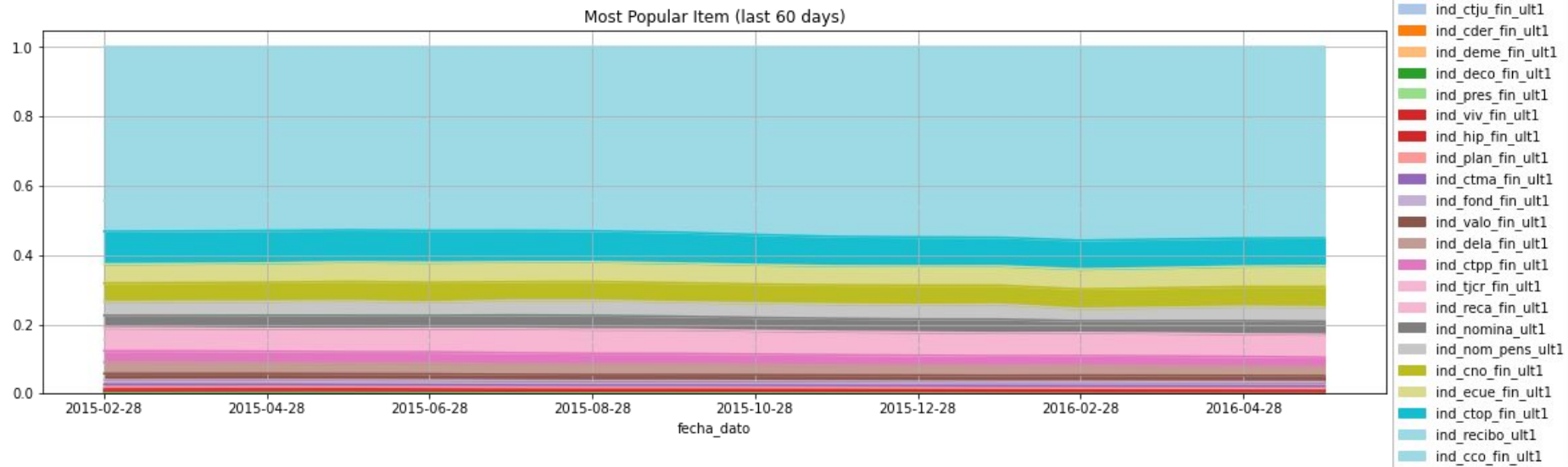


# The Data



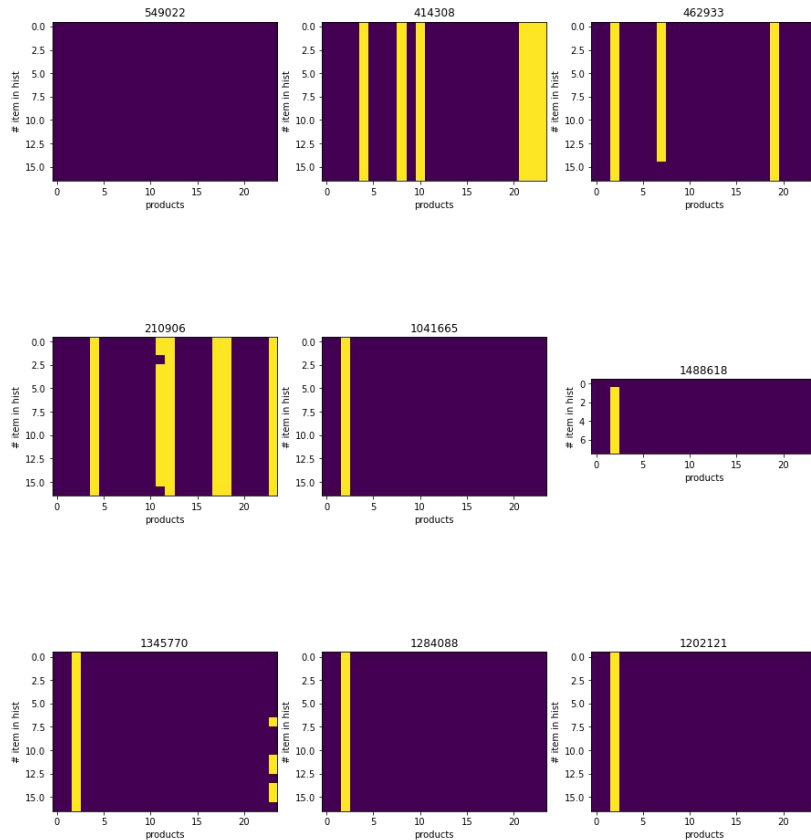


# The Data





# The Data





# The Challengers

1

**Most Popular Item in last 60 Days**  
(Non-User-Personalized)  
(Date-based)

2

**Most Popular Item by User in last 90 Days**  
(Personalized)

3

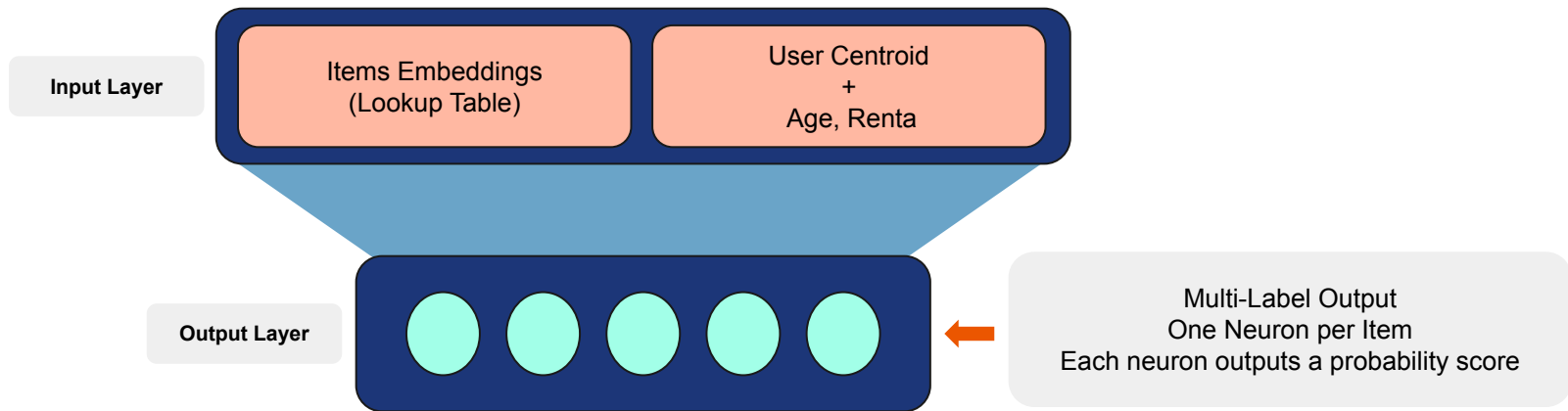
**RecSys NN.**  
(User Hist. Emb + Dense Features)

4

**LightFM.**  
(Only Interaction Features)



# RecSys NN





# Evaluation Methodology

Initial Window

1	2	3	4	5	6	7	8	9	10

Window Slide

1	2	3	4	5	6	7	8	9	10



## Evaluation Metric

### NDCG

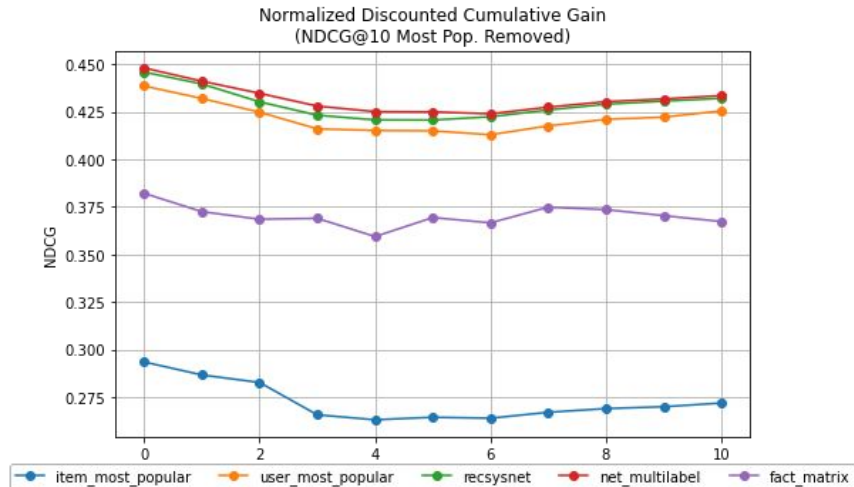
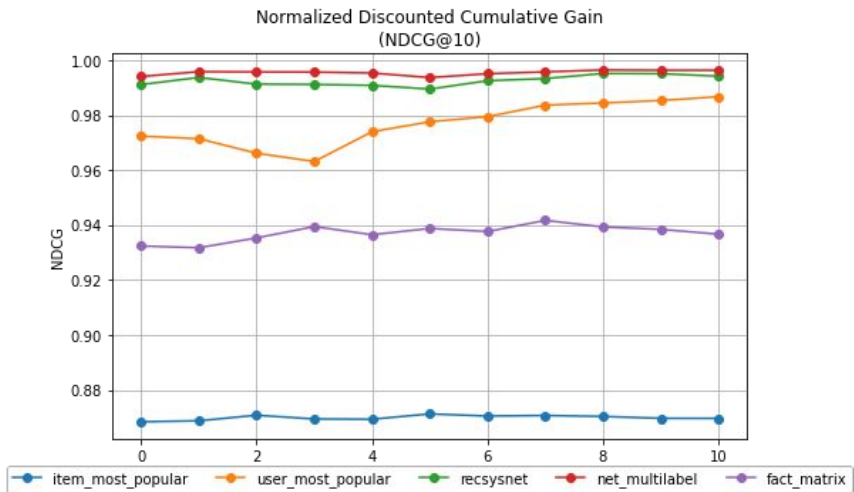
$i$	$rel_i$	$\log_2(i + 1)$	$\frac{rel_i}{\log_2(i + 1)}$
1	3	1	3
2	2	1.585	1.262
3	3	2	1.5
4	0	2.322	0
5	1	2.585	0.387
6	2	2.807	0.712

$$DCG_6 = \sum_{i=1}^6 \frac{rel_i}{\log_2(i + 1)} = 3 + 1.262 + 1.5 + 0 + 0.387 + 0.712 = 6.861$$

$$nDCG_p = \frac{DCG_p}{IDCG_p},$$



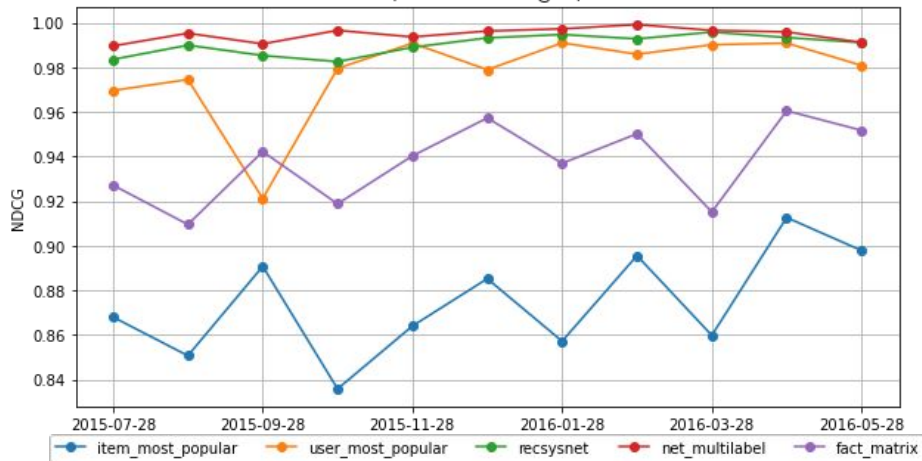
# Results



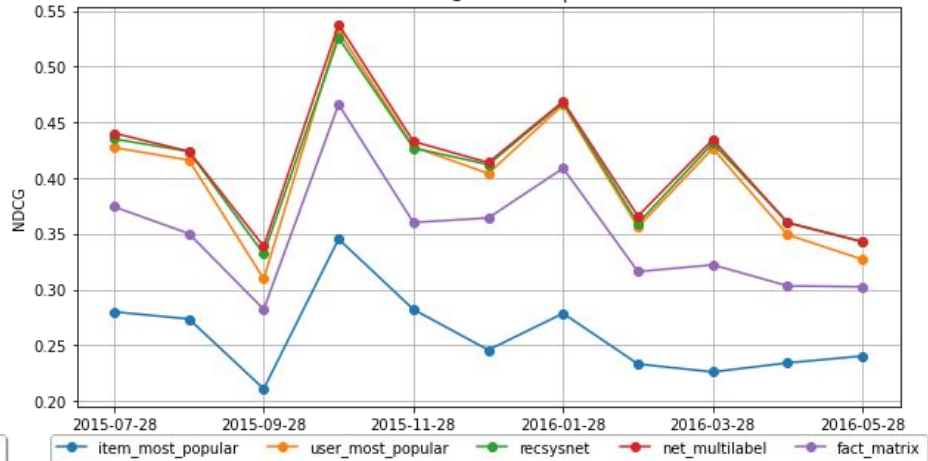


# Results

Normalized Discounted Cumulative Gain  
(Cold star NDCG@10)

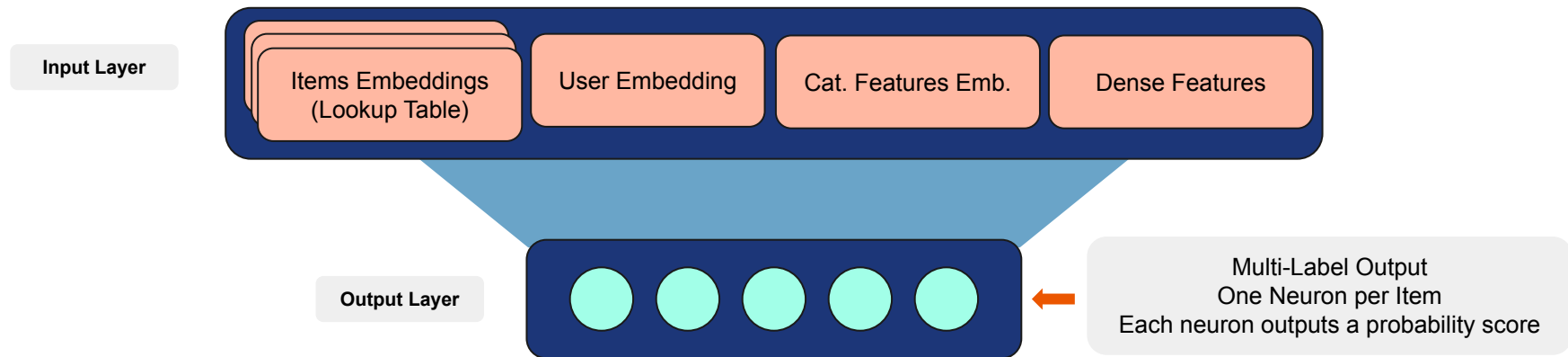


Normalized Discounted Cumulative Gain  
(Cold star NDCG@10 Most Pop. Removed)





# Future Work





# Thank you.

[The Source code](#)

