

Confluence

INFORMATION STORAGE AND RETRIEVAL

A G E N D A

- Motivation
- Problem Statement
- Implementation Details
- Results

MOTIVATION

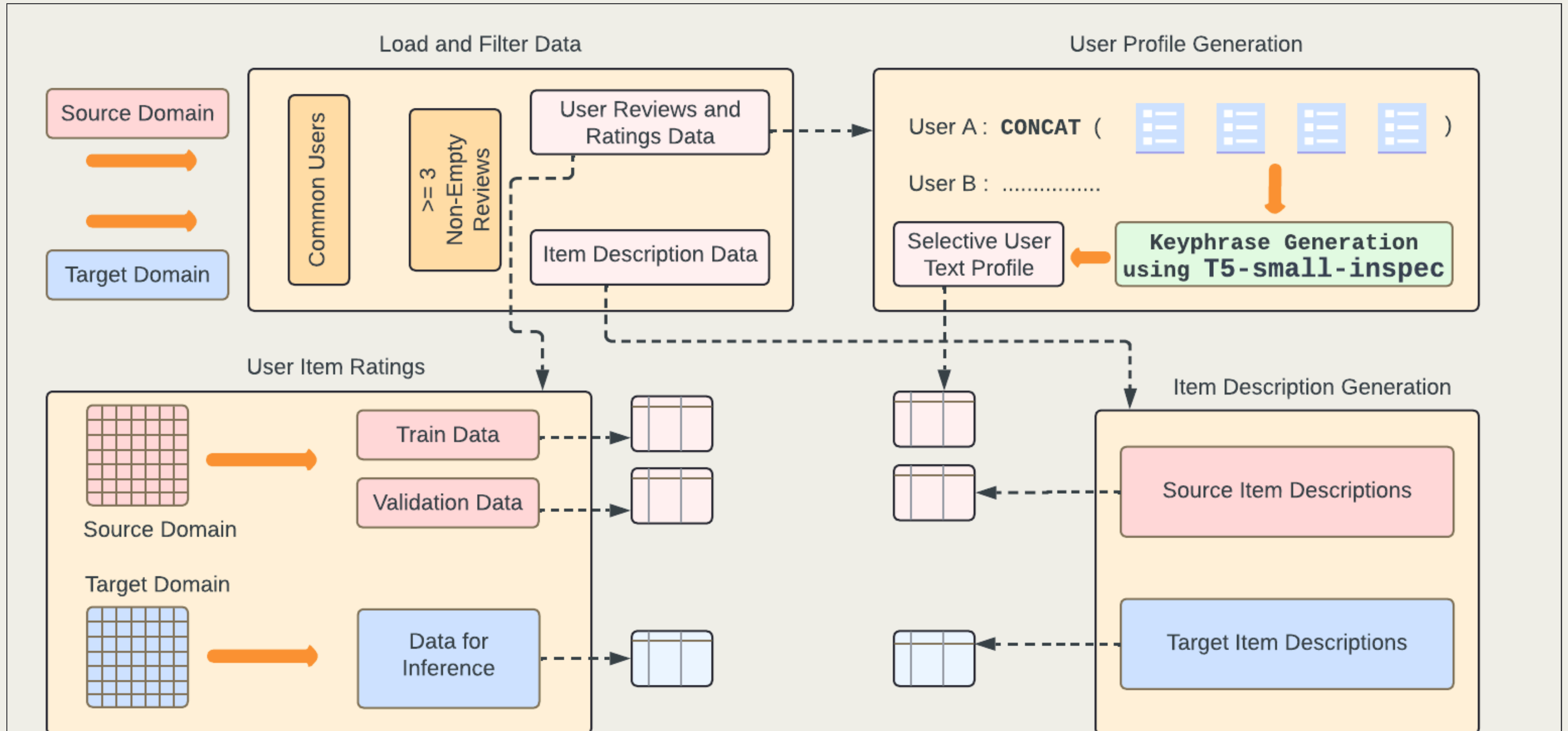
- Say you have watched and rated several action movies on a movie streaming platform.
- Now you go to a music platform you have never visited before.
- The idea is that the music platform should be able to recommend music to you based on your preferences from another domain, in this case, movies.
- How about we use knowledge of user behaviour in one domain and apply it in another?
- This in short is a cross-domain recommendation system.

PROBLEM STATEMENT

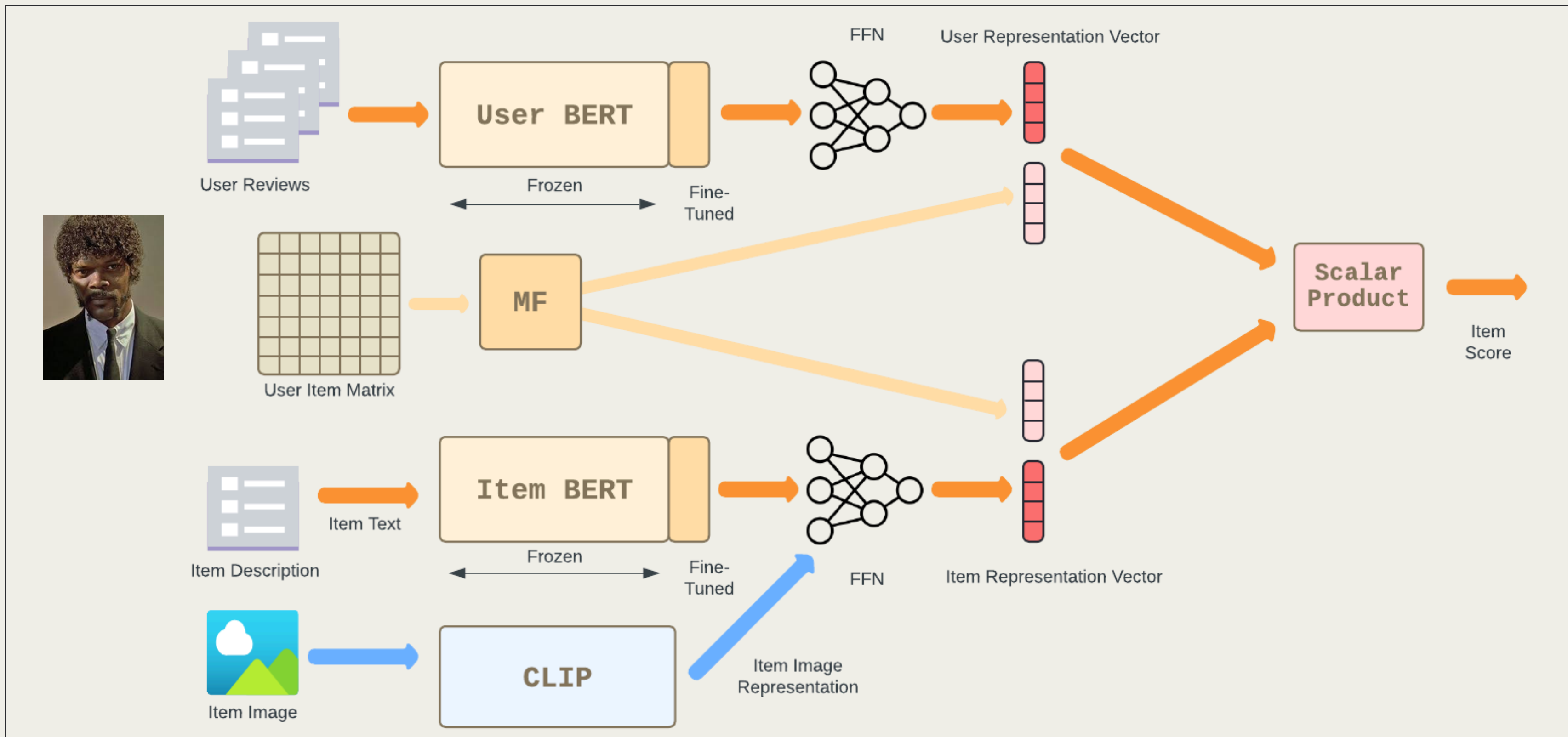
- We combine the user behavior characteristics with the item representation to estimate the user's preference for that particular item.
- If we have the item representations for other domains we can understand the user's preferences across domains.
- Can the user behavior characteristics be transferred to ANY other domain?
- We can transfer from beauty to fashion. But can we also transfer from beauty to music?
- Well, that is what we are trying to find out.

IMPLEMENTATION

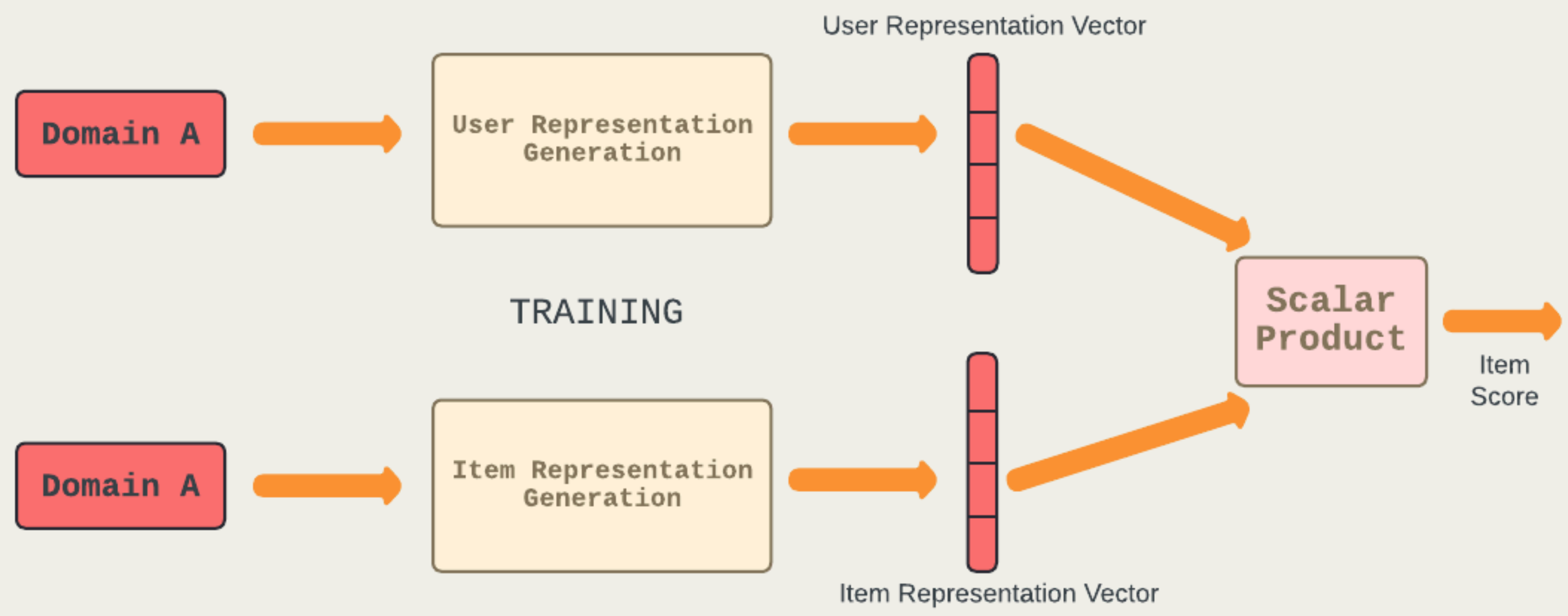
DATA PRE-PROCESSING



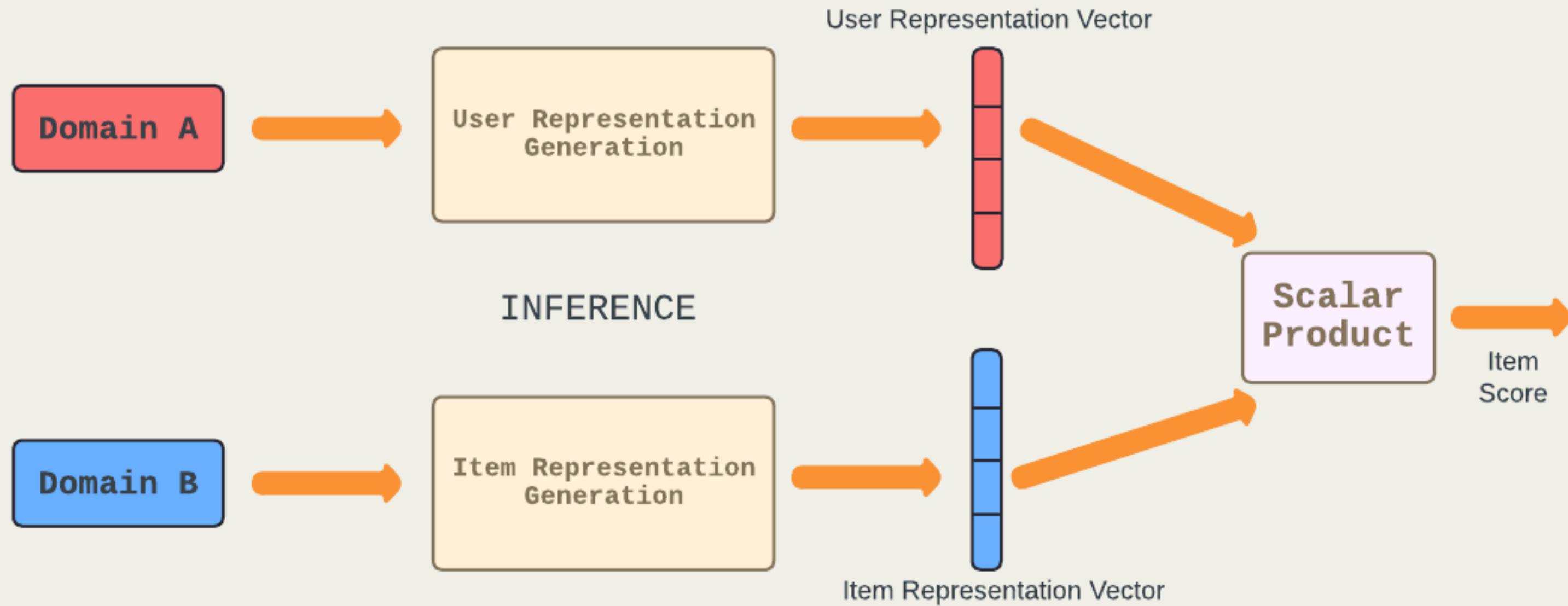
TWO TOWER MODEL



TRAINING



INFERENCE



DOMAINS

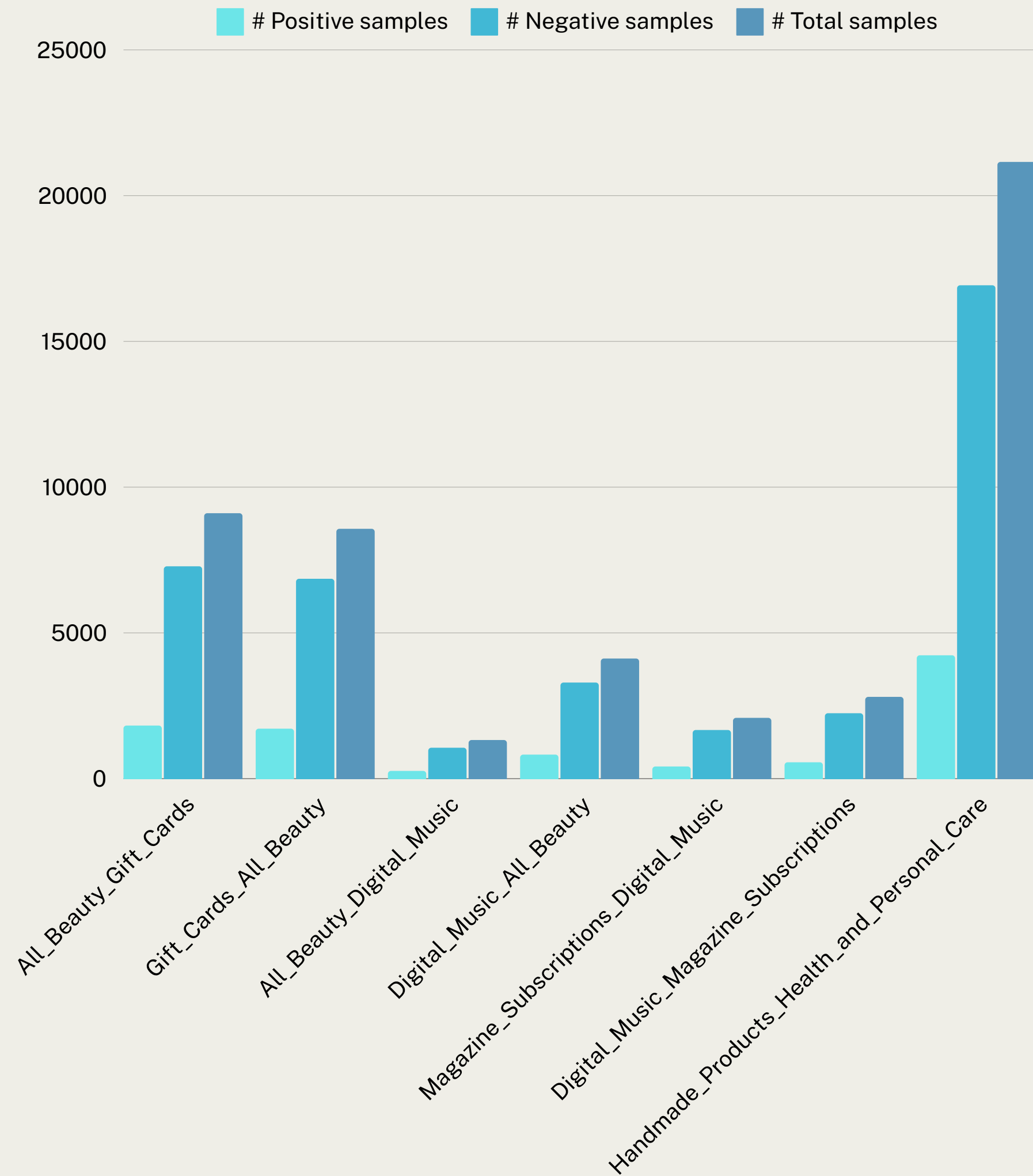
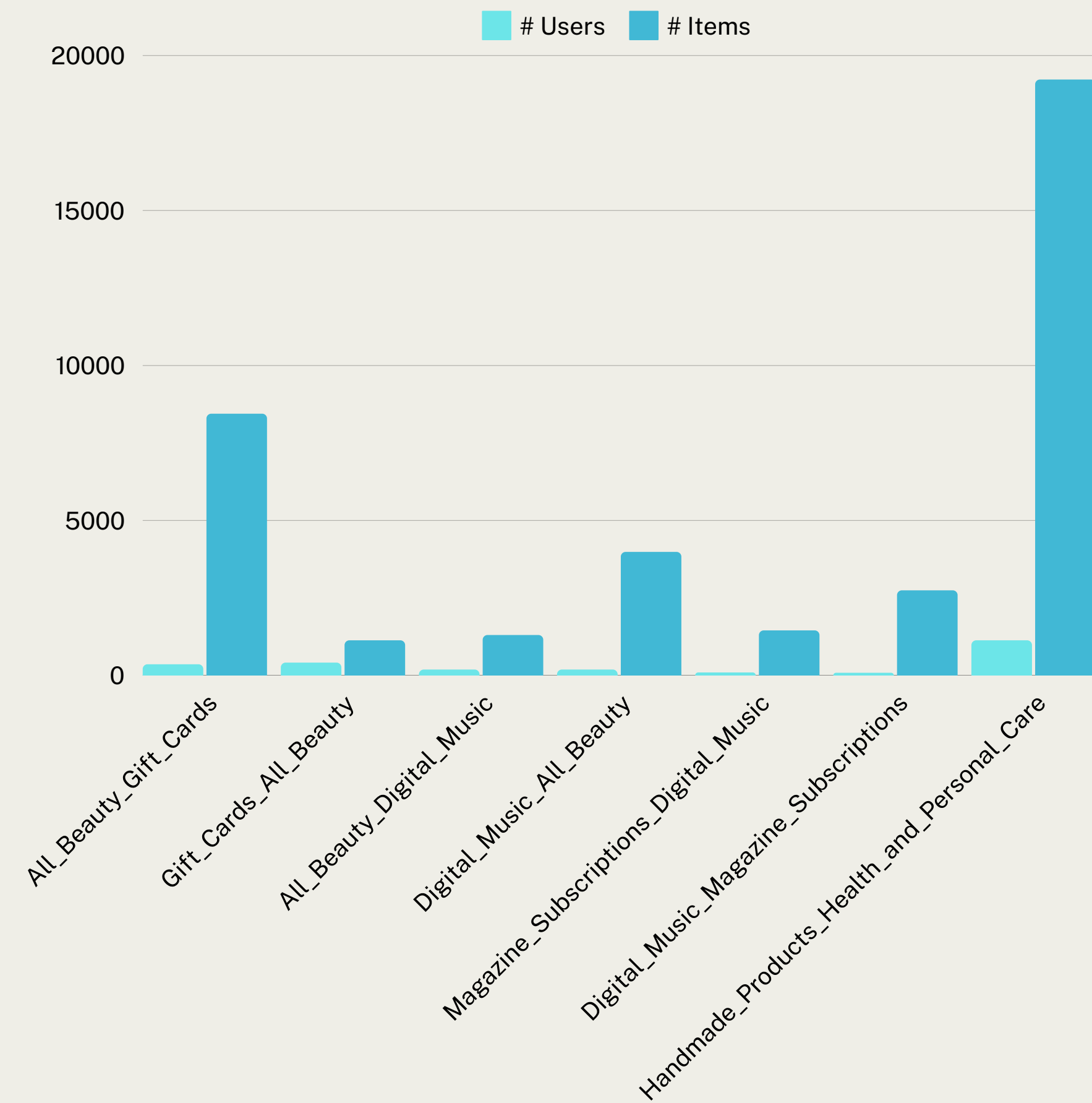
**All Beauty and
Gift Cards**

**All Beauty and
Digital Music**

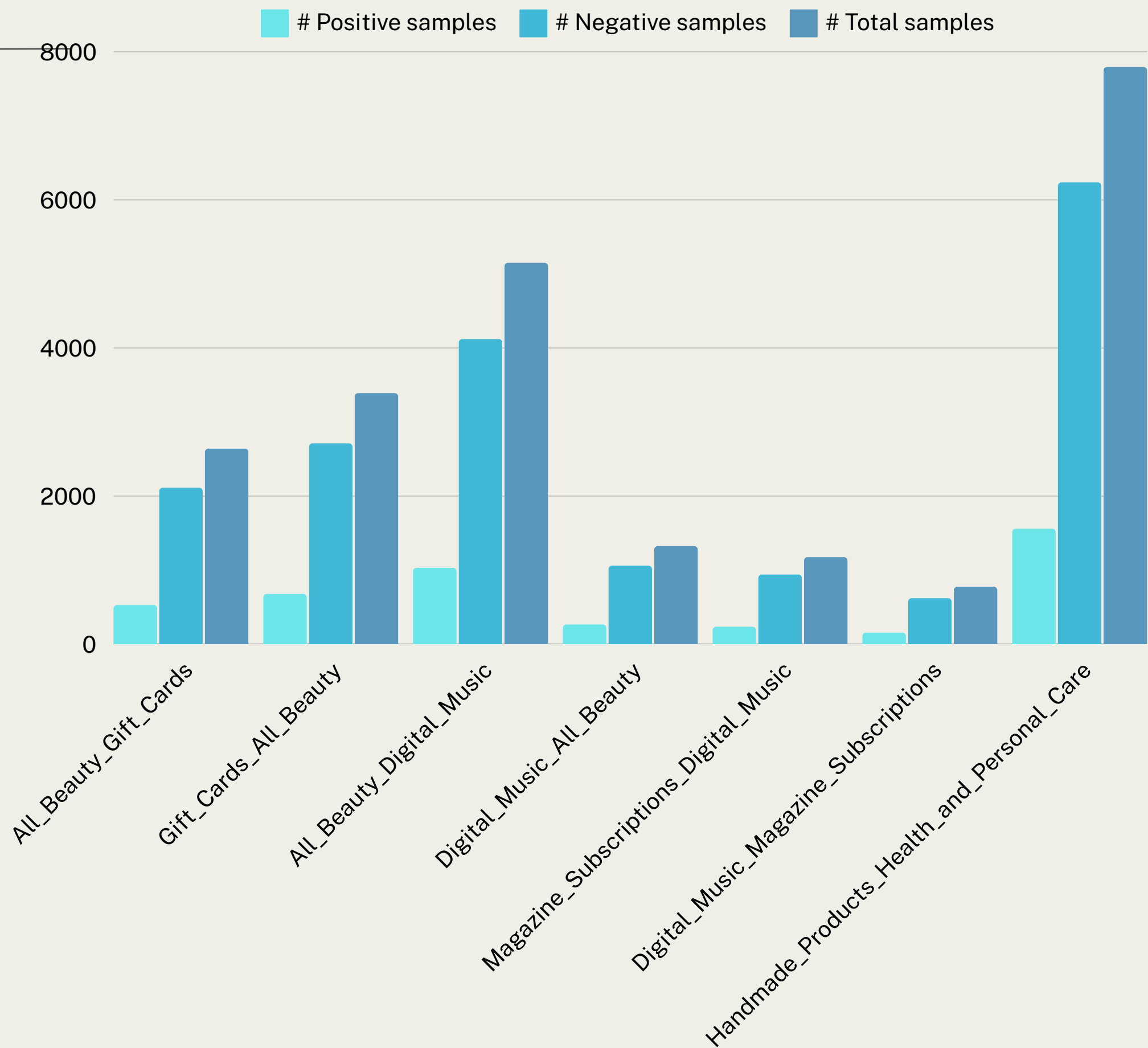
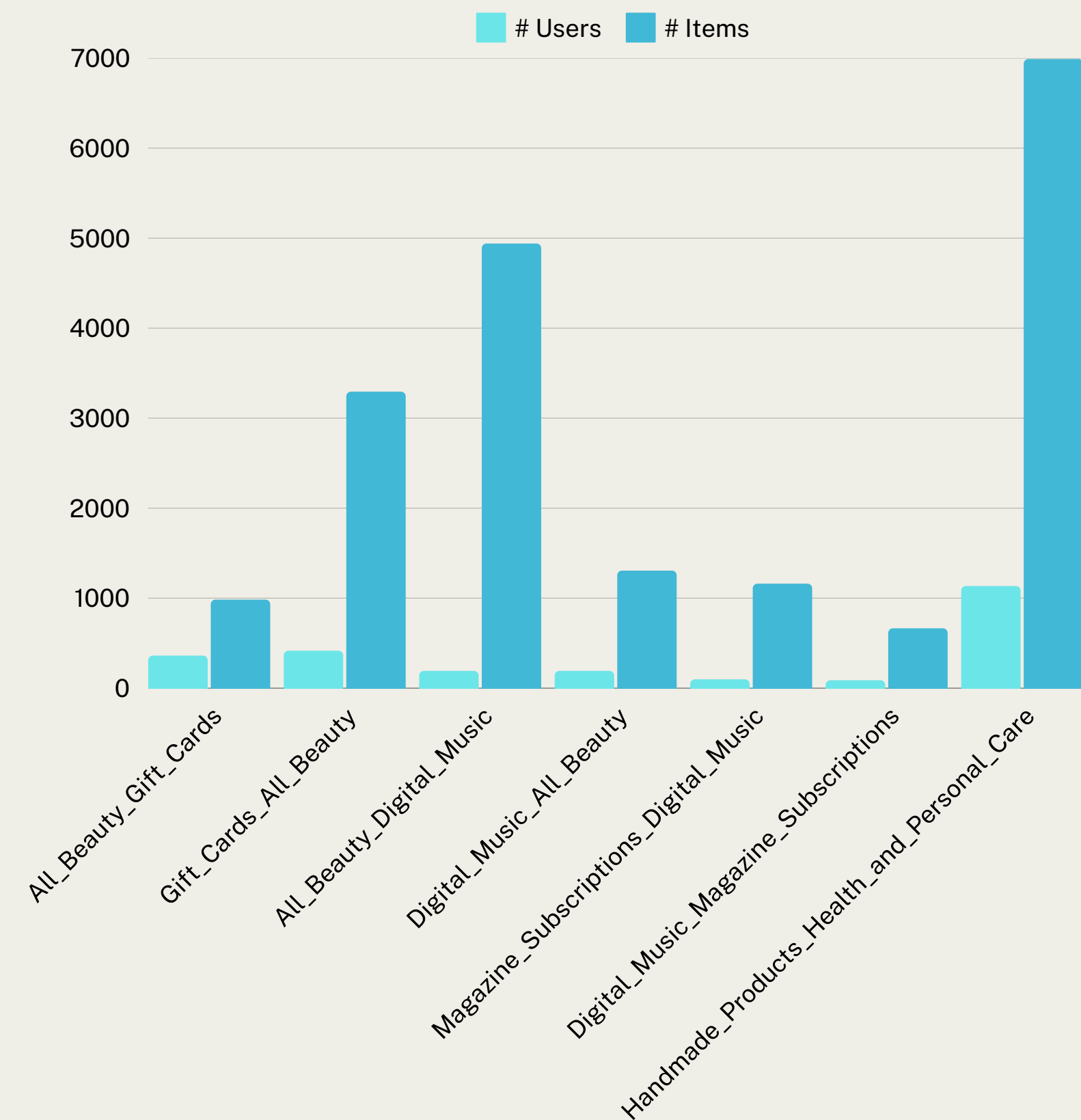
**Digital Music and
Digital
Subscription**

**Handmade
Products and
Health &
Personal Care**

DATA STATS - SOURCE



DATA STATS- TARGET



RESULTS

SOURCE

RESULTS- PRECISION@5

Source Domain	Target Domain	No CLIP No CF	CF	CLIP + CF
All_Beauty	Gift_Cards	0.3678	0.3712	0.3712
Gift_Cards	All_Beauty	0.3589	0.3597	0.3738
All_Beauty	Digital_Music	0.3678	0.3914	0.3942
Digital_Music	All_Beauty	0.3534	0.3421	0.3421
Magazine_Subscriptions	Digital_Music	0.3385	0.3385	0.3307
Digital_Music	Magazine_Subscriptions	0.3385	0.3752	0.3681
Handmade_Products	Health_and_Personal_Care	0.3915	0.3912	0.3905

RESULTS- RECALL@5

Source Domain	Target Domain	No CLIP No CF	CF	CLIP + CF
All_Beauty	Gift_Cards	0.831	0.832	0.834
Gift_Cards	All_Beauty	0.899	0.899	0.937
All_Beauty	Digital_Music	0.831	0.907	0.914
Digital_Music	All_Beauty	0.812	0.800	0.802
Magazine_Subscriptions	Digital_Music	0.864	0.860	0.867
Digital_Music	Magazine_Subscriptions	0.870	0.832	0.819
Handmade_Products	Health_and_Personal_Care	0.915	0.915	0.915

RESULTS
TARGET

RESULTS- PRECISION@5

Source Domain	Target Domain	No CLIP No CF	CF	CLIP + CF
All_Beauty	Gift_Cards	0.218	0.214	0.235
Gift_Cards	All_Beauty	0.250	0.252	0.250
All_Beauty	Digital_Music	0.293	0.288	0.289
Digital_Music	All_Beauty	0.279	0.263	0.262
Magazine_Subscriptions	Digital_Music	0.226	0.235	0.230
Digital_Music	Magazine_Subscriptions	0.236	0.247	0.258
Handmade_Products	Health_and_Personal_Care	0.273	0.276	0.274

RESULTS- RECALL@5

Source Domain	Target Domain	No CLIP No CF	CF	CLIP + CF
All_Beauty	Gift_Cards	0.678	0.670	0.754
Gift_Cards	All_Beauty	0.711	0.714	0.709
All_Beauty	Digital_Music	0.777	0.785	0.793
Digital_Music	All_Beauty	0.757	0.775	0.771
Magazine_Subscriptions	Digital_Music	0.669	0.654	0.678
Digital_Music	Magazine_Subscriptions	0.645	0.605	0.707
Handmade_Products	Health_and_Personal_Care	0.760	0.765	0.756

MEET THE TEAM



The Meme
Onwasha



All By Myself...
Indian Chandler



Backpack Backpack
**The Man With All The
Essentials**



*Society is a Social
Construct*
HELP

Thank You

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