

H&M Clothes Recommender

A Content and Collaborative
Approach

By Alice Agrawal
June, 2022



Table of contents

01

**Business
Problem**

02

**Data
Understanding**

03

**Methods &
Modeling**

04

App

05

Conclusions

06

Next Steps



A vertical decorative bar on the left side of the slide featuring a black and white houndstooth pattern.

01

Business Problem

1. Covid-19 Lockdown
2. Better shopping experience
3. Large description details
4. New clothes every season



02 Data Understanding



Data Source

Kaggle Competition
Hosted by H&M



Customer Transactions

31M transactions
2 years - 2018 to 2020



Article Descriptions

Metadata
Description of articles
Product images

03 Methods

Collaborative Filtering

Transaction data -
articles bought

**Customer to
Customer**

Content Based

Description of the
articles

**Articles
Metadata**

App Deployment

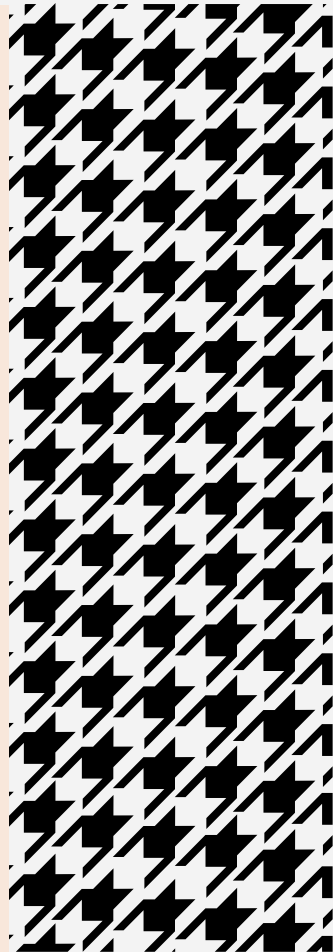
Existing customer &
Similar articles

Streamlit



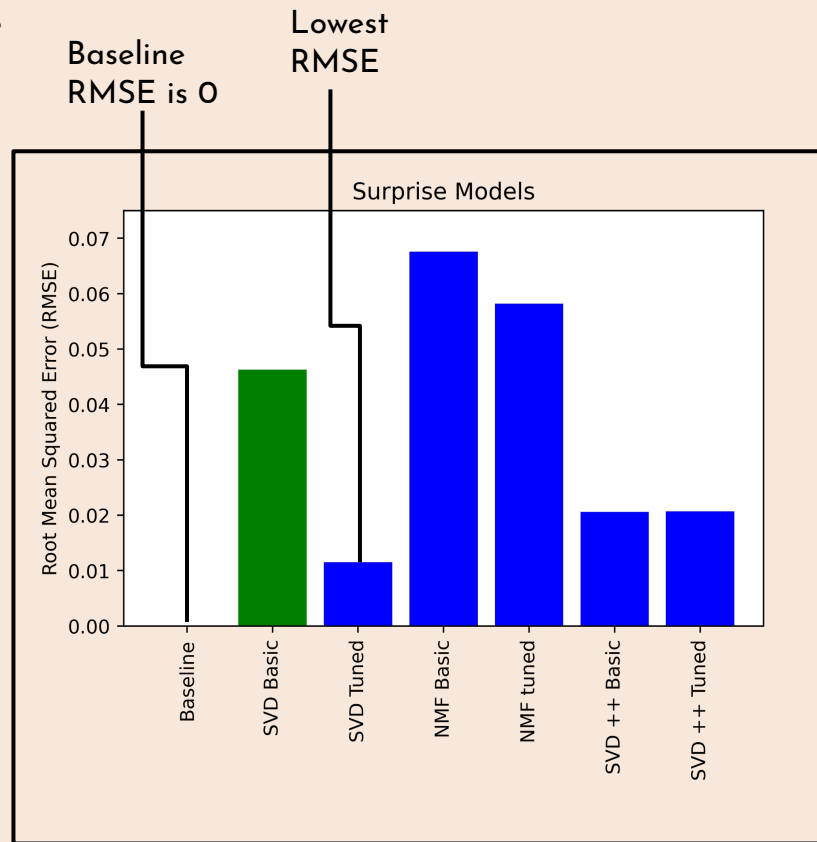


Modeling



Collaborative Filtering

Surprise Library
Score - RMSE

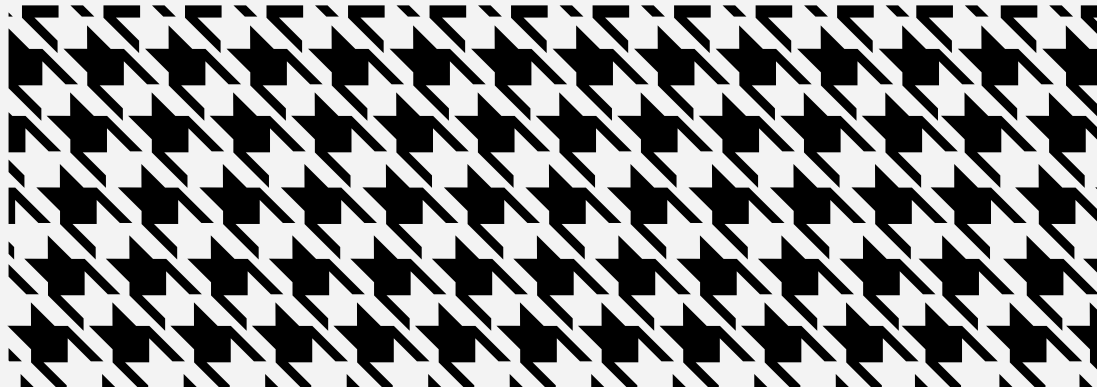


Collaborative Filtering Example

CustomerID: 002611889659ab1051fc3e4e870f2b603c3aaa902ffe6ab59e83461c76c879dc

How many recommendations? 10

	article_id	Product Name	Product Type Name	Product Group Name	Index Group Name	Garment Group Name
0	626813003	Syrup ISW 19	Blouse	Garment Upper body	Ladieswear	Blouses
1	777229004	Rick cardigan	Cardigan	Garment Upper body	Menswear	Knitwear
2	867837005	APRIL TIE BLOUSE S.L	Vest top	Garment Upper body	Baby/Children	Dresses/Skirts girls
3	609176002	Maja sneaker NEW	Sneakers	Shoes	Divided	Shoes
4	692834007	TP Tom chino shorts	Shorts	Garment Lower body	Baby/Children	Shorts
5	877429001	Sally shopper	Bag	Accessories	Ladieswear	Accessories
6	735751004	Milan Fringe	Jacket	Garment Upper body	Divided	Outdoor
7	874351004	Tyron waist chino	Trousers	Garment Lower body	Baby/Children	Woven/Jersey/Knitted mix Baby
8	702198004	cleo tunic	Blouse	Garment Upper body	Baby/Children	Dresses/Skirts girls
9	510684017	Lory sweatpants	Trousers	Garment Lower body	Divided	Jersey Fancy



Content Based

Cosine Similarity

- **Metadata**
 - article description.
- **Function:**
 - Returns the top n-recommendations.



Content Based Examples

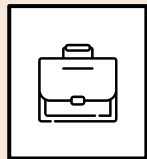
Article ID: 760158001

How many recommendations? 10

	article_id	Product Name	Product Type Name	Product Group Name	Index Group Name	Garment Group Name
0	760158001	DIV Rachel denim	Trousers	Garment Lower body	Divided	Unknown
1	760214002	Semide tie dress	Dress	Garment Full body	Ladieswear	Dresses Ladies
2	760208001	Class Cleo bracelet	Bracelet	Accessories	Ladieswear	Accessories
3	760195006	FLORA turtle neck	T-shirt	Garment Upper body	Baby/Children	Jersey Basic
4	760195005	FLORA turtle neck	T-shirt	Garment Upper body	Baby/Children	Jersey Basic
5	760195004	FLORA turtle neck	T-shirt	Garment Upper body	Baby/Children	Jersey Basic
6	760195003	FLORA turtle neck	T-shirt	Garment Upper body	Baby/Children	Jersey Basic
7	760195002	FLORA turtle neck	T-shirt	Garment Upper body	Baby/Children	Jersey Basic
8	760195001	FLORA turtle neck	Top	Garment Upper body	Baby/Children	Jersey Basic
9	760184002	Attila Boot SB	Boots	Shoes	Baby/Children	Shoes

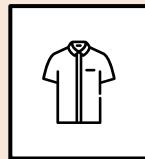


Next Steps



Data

Expand the data



Marketing

Targeted marketing



App

Mobile App



Thanks!

Do you have any questions?

alice.agrawal30@gmail.com

+1 415 699 8737



CREDITS: This presentation template was created by **Slidesgo**, including icons by **Flaticon** and infographics & images by **Freepik**

