



The next generation of ML trained
e-commerce

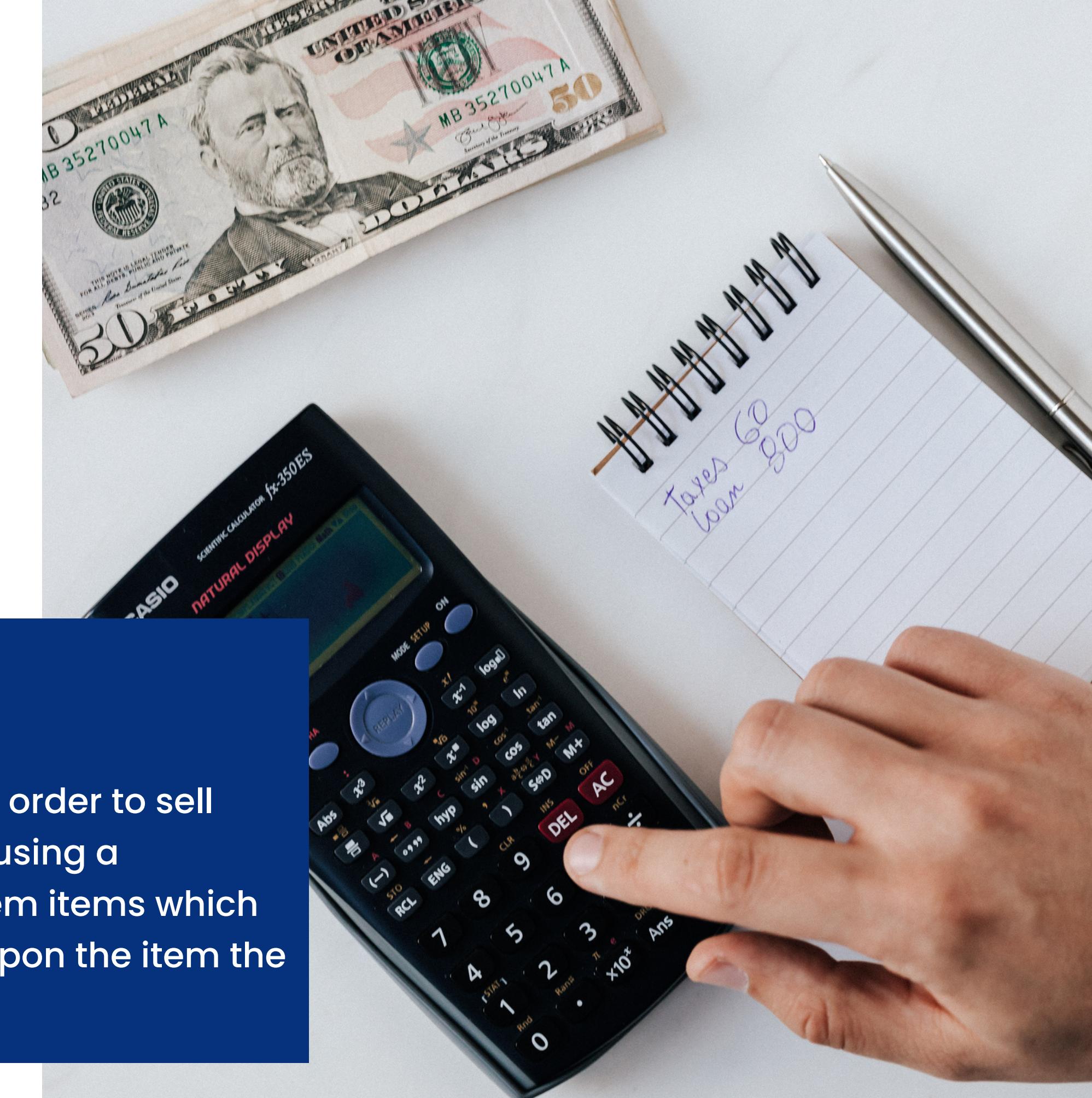
Team 6 - Runtime Terror

Changing the e-commerce game with ML



Introduction

Drop shipping has been getting more popular in order to sell items day by day. Our website helps buyers by using a recommendation system by recommending them items which have been bought quite frequently depending upon the item the user is currently viewing.



ML Models Used

Two types of models have been incorporated: a popularity model and a collaborative filtering model



Each model has been trained with respect to purchase count, purchase dummy and scaled purchase count parameters.



The models are evaluated on the basis of RMSE scores, precision and recall.



The best model is selected for implementation after their evaluation.



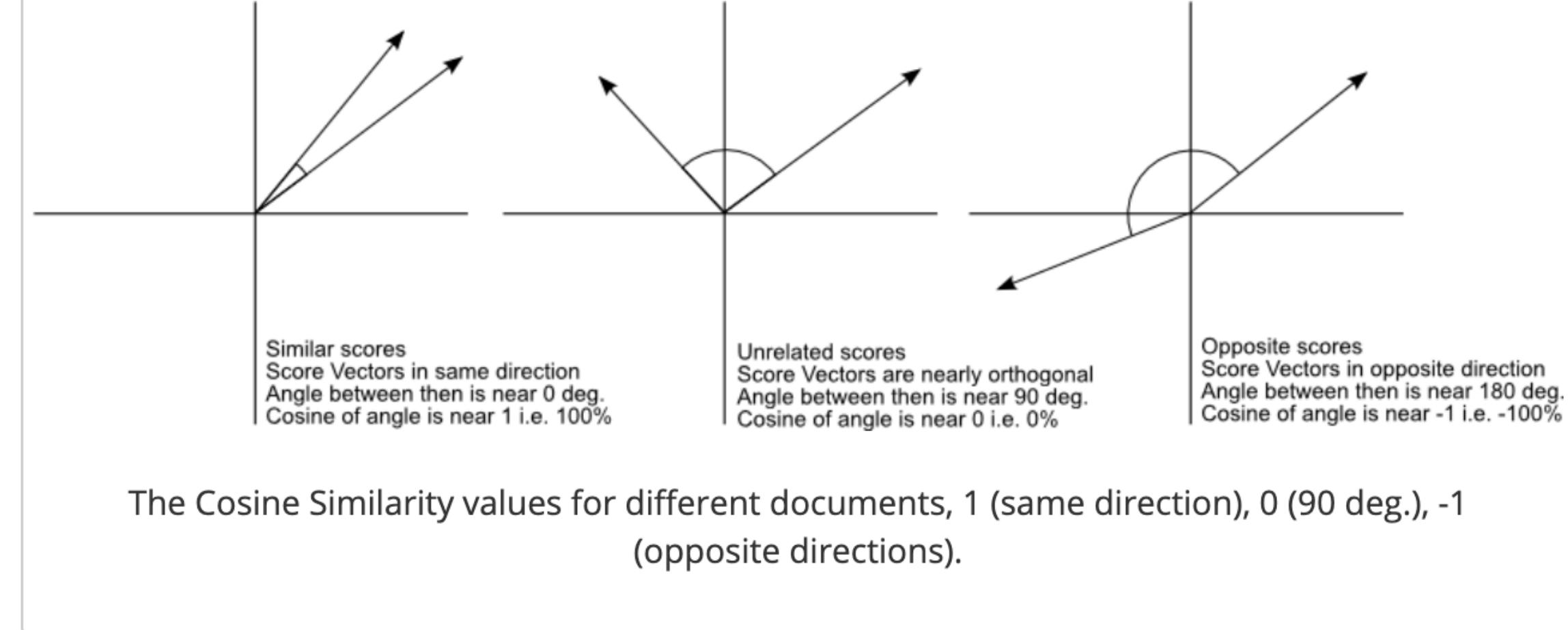
The .csv file of the output is exported to a database and is replicated on the website

Model Implemented

The cosine similarity on purchase-dummy model has been selected on the basis of various parameters

Cosine Similarity is a measurement that quantifies the similarity between two or more vectors. The cosine similarity is the cosine of the angle between vectors. The vectors are typically non-zero and are within an inner product space.

The cosine similarity is described mathematically as the division between the dot product of vectors and the product of the euclidean norms or magnitude of each vector.



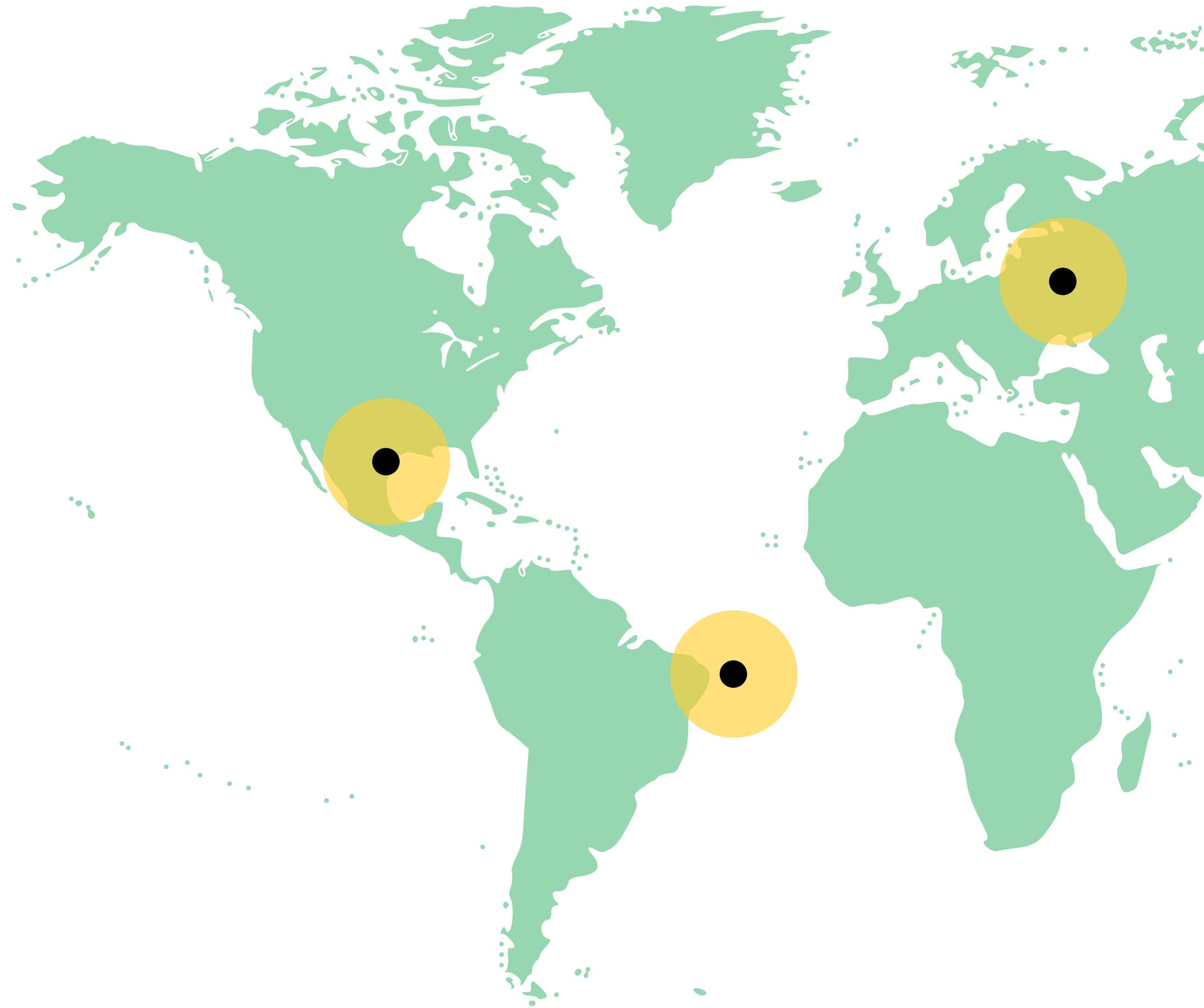
Sample Outputs

| customerId | productId | score | rank |
|------------|-----------|--------------------|------|
| 1553 | 248 | 3.111111111111111 | 1 |
| 1553 | 37 | 3.0988142292490117 | 2 |
| 1553 | 34 | 3.030888030888031 | 3 |
| 1553 | 132 | 3.015873015873016 | 4 |
| 1553 | 0 | 2.959847036328872 | 5 |
| 1553 | 3 | 2.853249475890985 | 6 |
| 1553 | 27 | 2.769230769230769 | 7 |
| 1553 | 110 | 2.7349397590361444 | 8 |
| 1553 | 32 | 2.650717703349282 | 9 |
| 1553 | 82 | 2.609865470852018 | 10 |
| 20400 | 248 | 3.111111111111111 | 1 |
| 20400 | 37 | 3.0988142292490117 | 2 |
| 20400 | 34 | 3.030888030888031 | 3 |
| 20400 | 132 | 3.015873015873016 | 4 |
| 20400 | 0 | 2.959847036328872 | 5 |
| 20400 | 3 | 2.853249475890985 | 6 |
| 20400 | 27 | 2.769230769230769 | 7 |
| 20400 | 110 | 2.7349397590361444 | 8 |
| 20400 | 32 | 2.650717703349282 | 9 |
| 20400 | 82 | 2.609865470852018 | 10 |
| 19750 | 248 | 3.111111111111111 | 1 |
| 19750 | 37 | 3.0988142292490117 | 2 |
| ... | | | |
| 19750 | 82 | 2.609865470852018 | 10 |

[10000 rows x 4 columns]

| | |
|----------------------------|---------------------------------|
| customer_recomendation(4) | Python |
| recommendedProducts | 2 82 249 14 86 215 39 194 111 8 |
| Name: 4, dtype: object | |
| customer_recomendation(21) | |
| recommendedProducts | 48 38 93 36 79 2 50 144 1 0 |
| Name: 21, dtype: object | |

Now, let's have a
look at our
website





Search for products



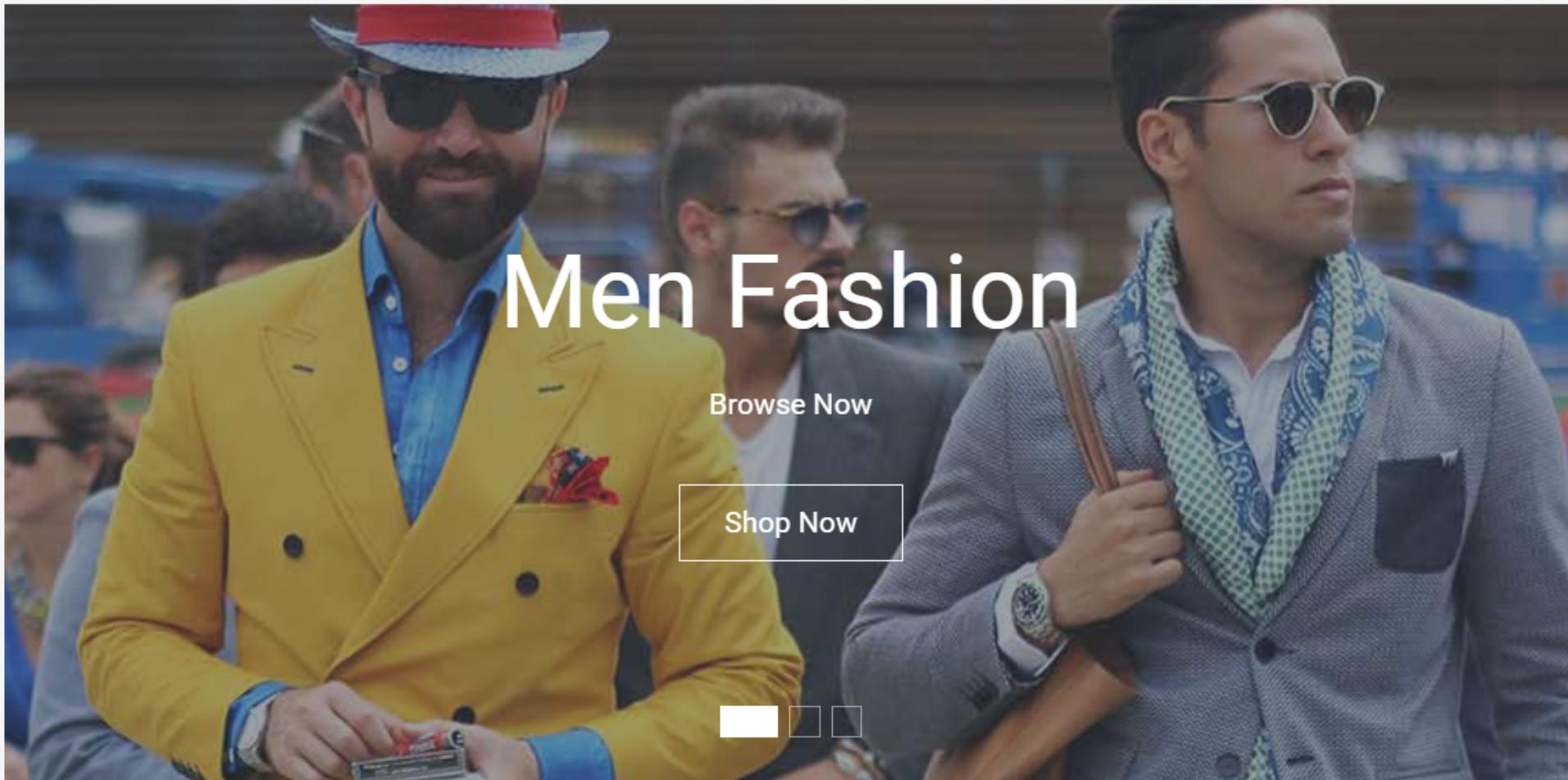
Customer Service
+91 9920946305

≡ Categories

Home Shop Shop Detail Pages Contact

Seller

Heart 0 Cart 0





Camera

★★★★★ (74 Reviews)

₹18000.00

₹25000.00

Great Piece of Technology to Capture Memories...



1



Add To Cart

Share on: [f](#) [t](#) [in](#) [p](#)



YOU MAY ALSO LIKE



Nikon

₹2500.00 ₹3000.00

★★★★★ (39)



Sony

₹1500.00 ₹2000.00

★★★★★ (45)



Canon

₹7500.00 ₹10000.00

★★★★★ (30)



Sony1

₹30000.00 ₹35000.00

★★★★★ (23)



TOP SELLING PRODUCTS



Iphone

₹70000.00 ₹75000.00

★★★★★ (69)



Dell

₹35000.00 ₹40000.00

★★★★★ (54)



Comfort

₹7500.00 ₹10000.00

★★★★★ (34)



Nikon

₹30000.00 ₹35000.00

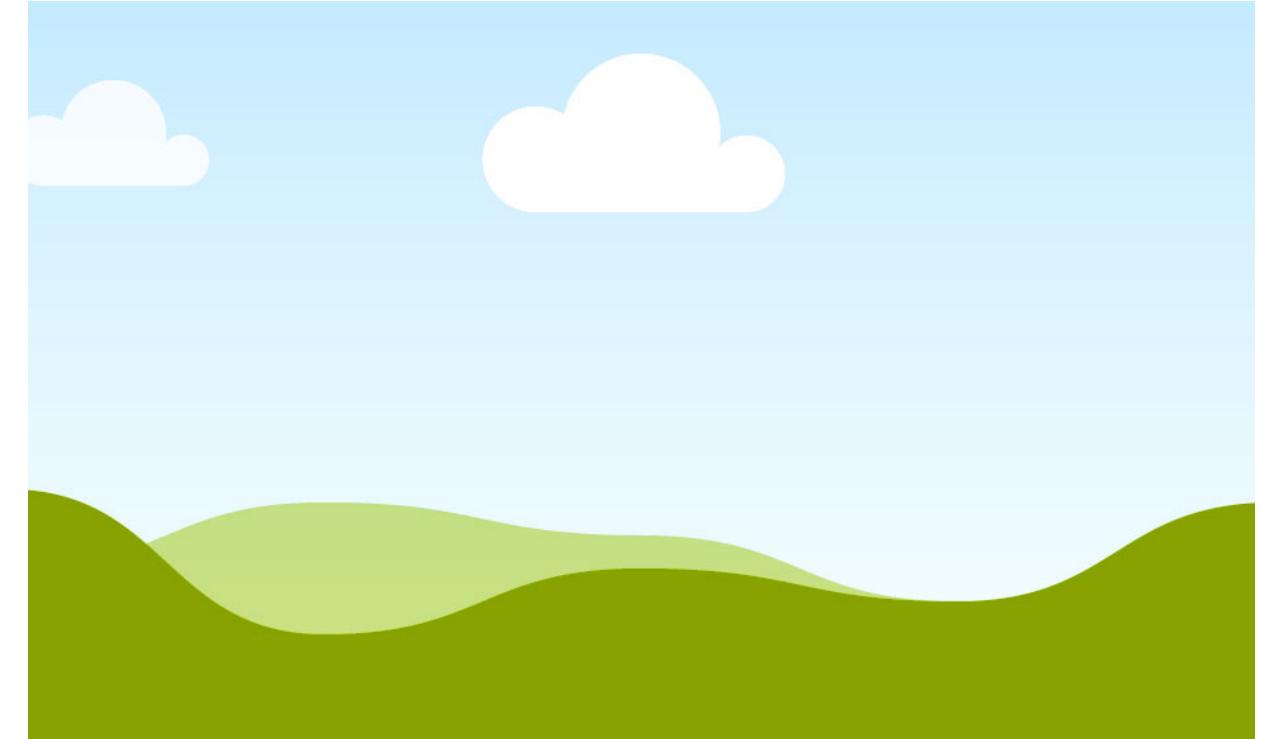
★★★★★ (24)



Tech Stack

- PYTHON LIBRARIES USED:-
SKLEARN
PANDAS
NUMPY
TURICREATE

- FRONT END:-
HTML
CSS (Bootstrap)
JAVASCRIPT



Future Prospects

Ways to make FastBuy
more fun!



Adding filters to the recommendations based on price relevance etc.



Using description based recommendation engines



Improving accuracy of already existing models



Making real time dynamic database for sellers

Thank You