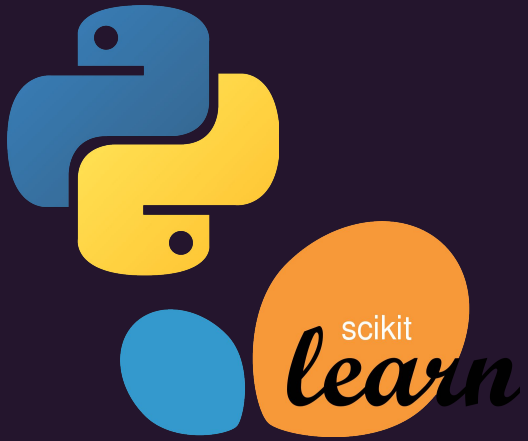
CODE HEROKU

Please turn off your webcam

If you are joining from a mobile phone
be sure to click on
Join via Device Audio

We are waiting for other participants to join
We will begin at 4:30 PM IST



Building a Movie Recommendation Engine

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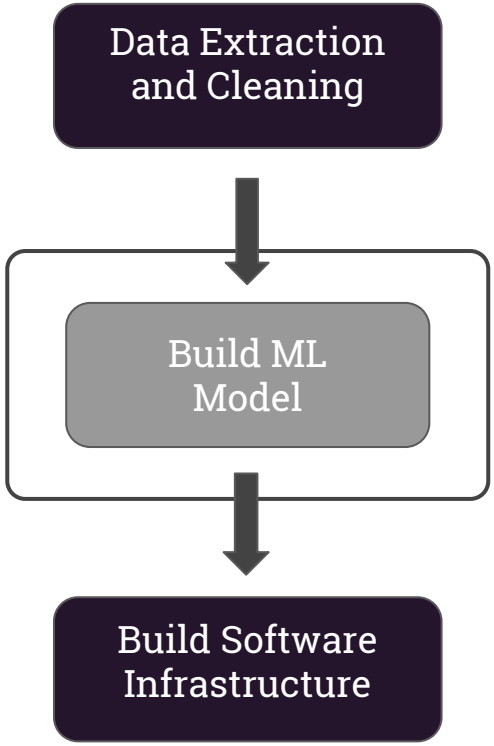
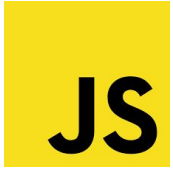
CODE HEROKU

SESSION OBJECTIVES

- Quick Recap
- Recommendation Systems
- Revise Some Math
- Build it!

Machine Learning Pipeline





Supervised Machine Learning

Features

House Size (Sq feet)	Location	Age (years)	Prize (Lakh Rs)
500	Mumbai	2	70
1500	Pune	3	100
2000	Banglore	4	60
1000	Mumbai	2	?
3000	Pune	10	?

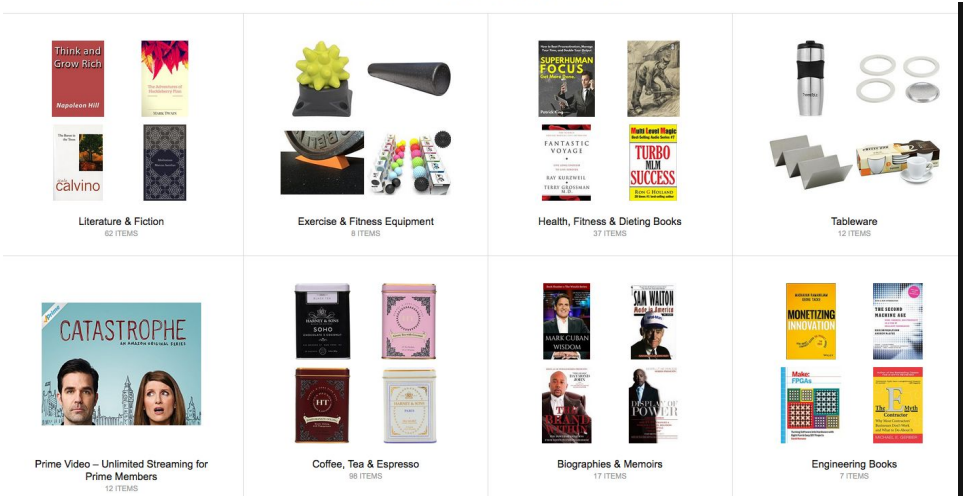
Training Data

Test Data

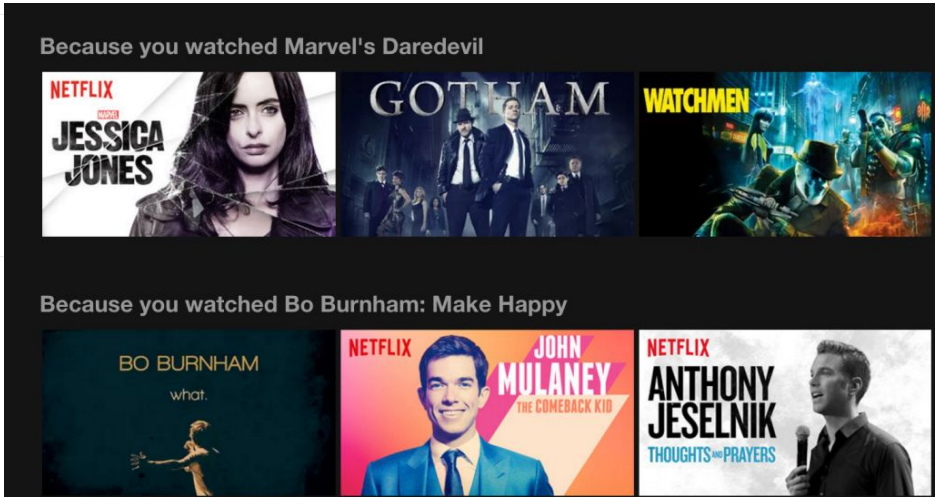
What's Common?

1. Amazon

Recommended for you, Thomas



2. Netflix



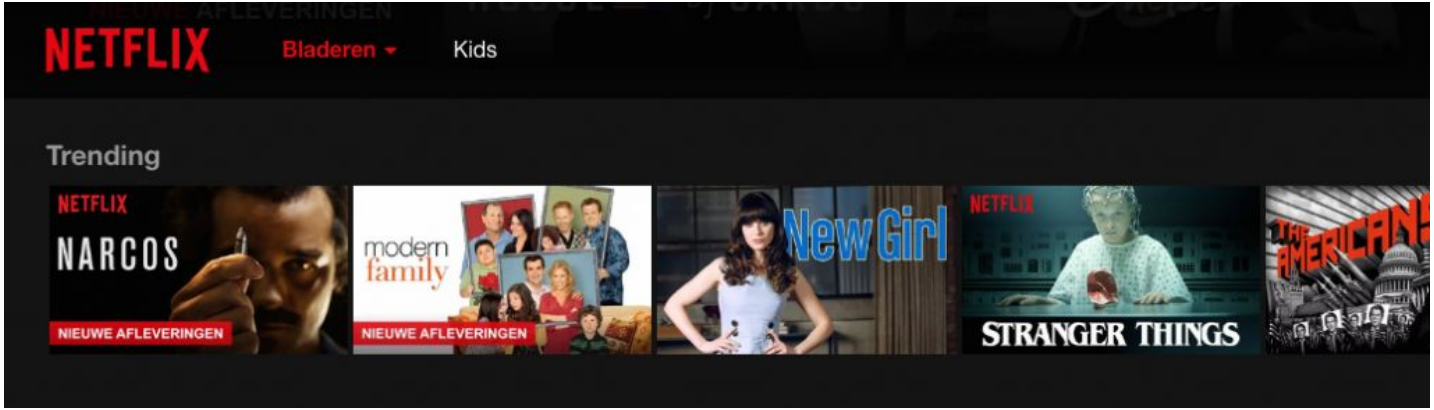
QUIZ

Who are the **Users** and **Items** for RE in the following platforms?

1. LinkedIn — Users: Members; Items: Members
2. Amazon — Users: Members; Items: Products (E.g. Books, Electronics)
3. Netflix — Users: Members; Items: Movie
4. Facebook — Users: Members; Items: Members

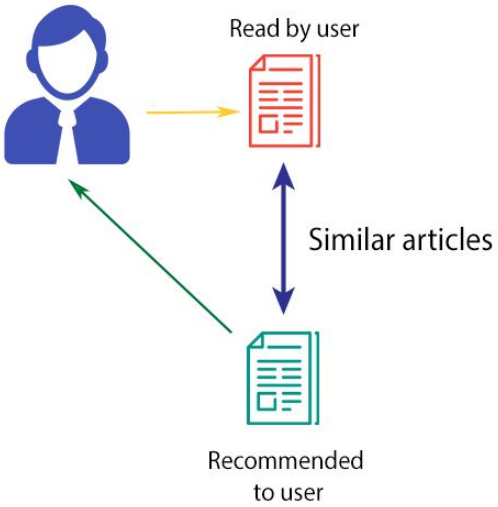
Implementing A Recommender System

1. Popularity / Rating Based System

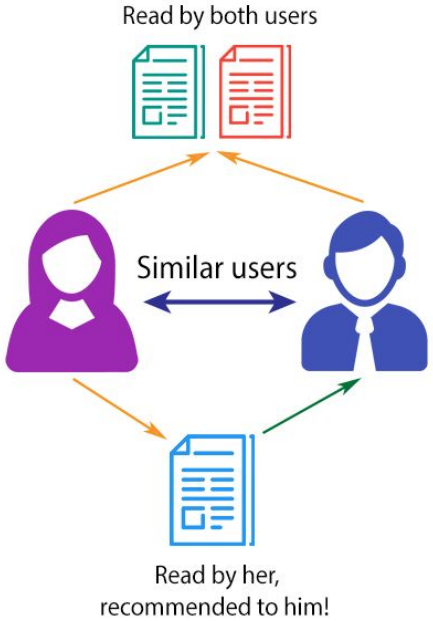


Implementing A Recommender System

2. Content Based



3. Collaborative Filtering

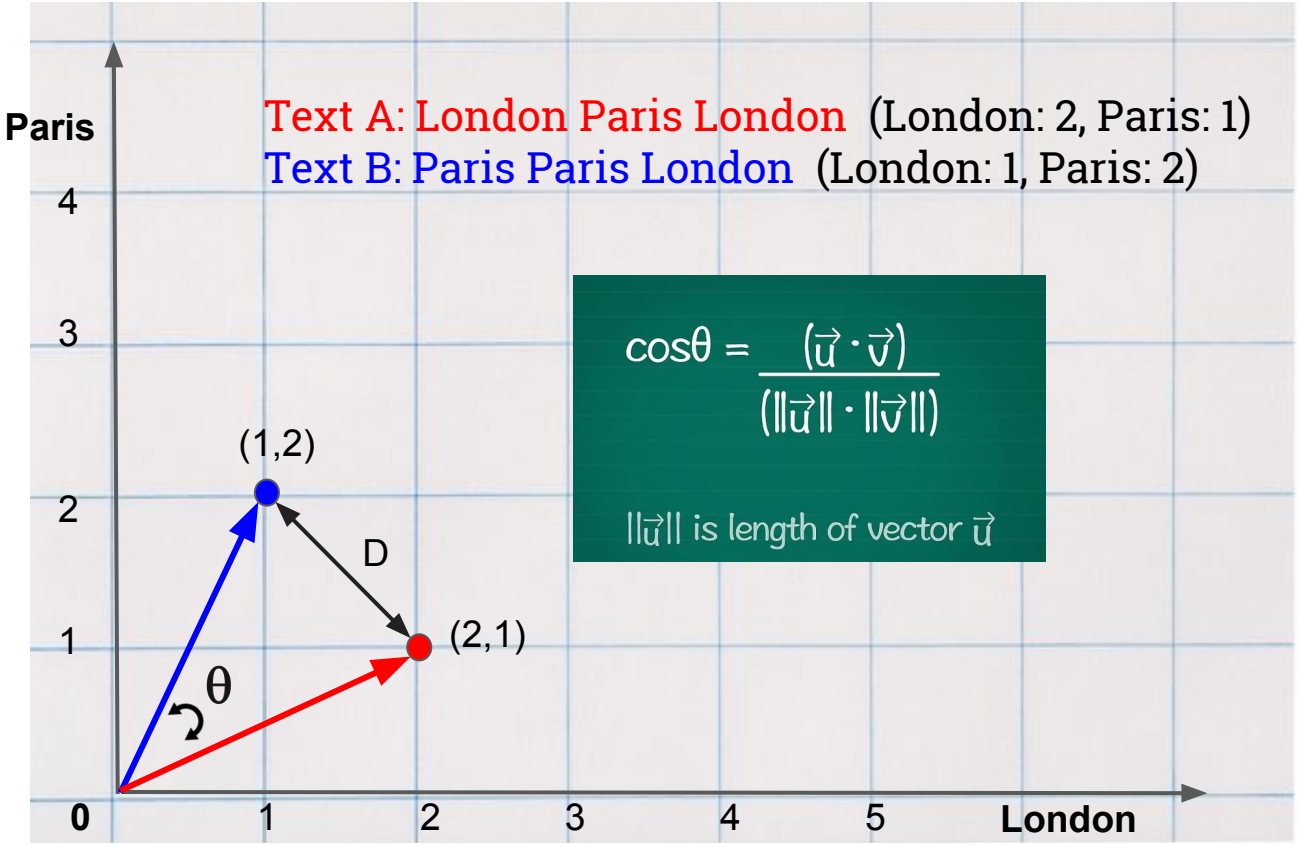


Similarity Between Content

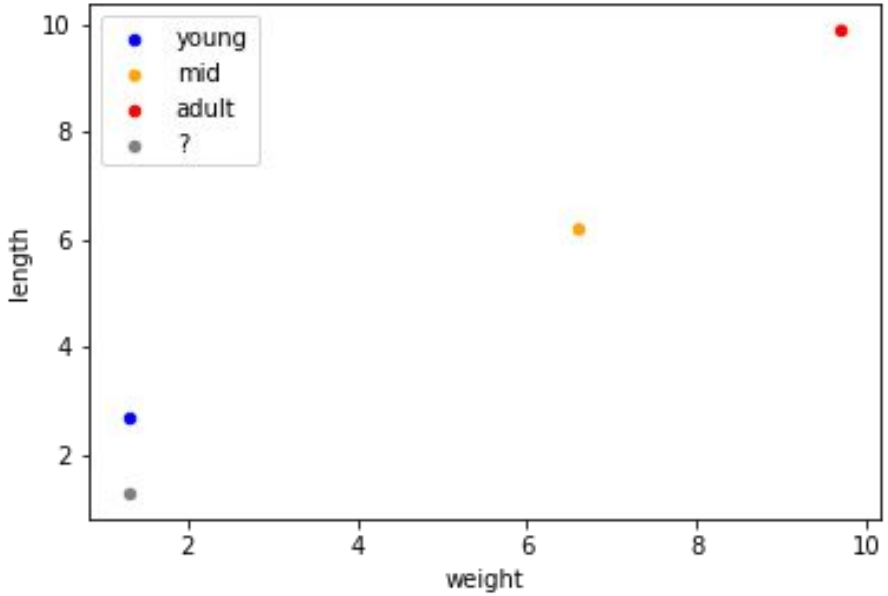
Text A: London Paris London

Text B: Paris Paris London

Distance Between Two Vectors



When To Use Angular Distance?



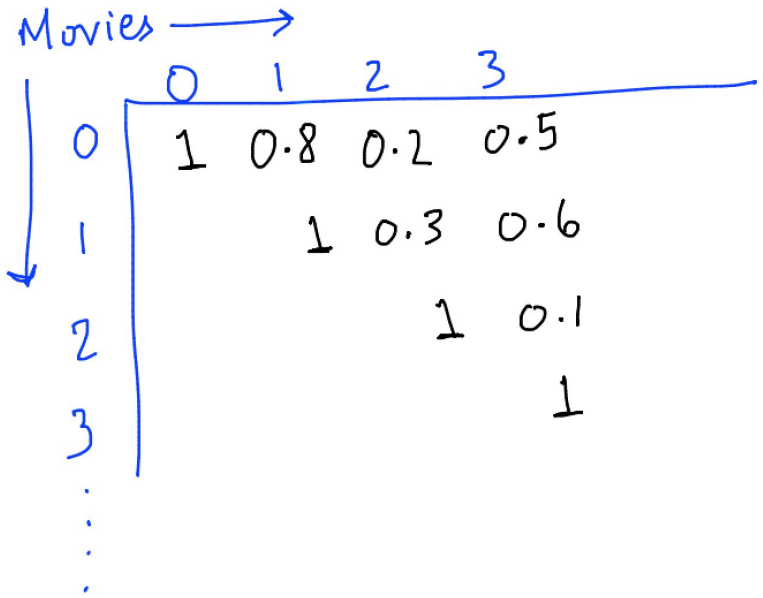
Quiz

In which of the following scenarios you are most likely to use Cosine Similarity measure?

1. Determining gender based on shoe length, height, weight etc.
2. Comparing similarities between documents of uneven size
3. Predicting rainfall based on city location, temperature, humidity etc.

Quiz

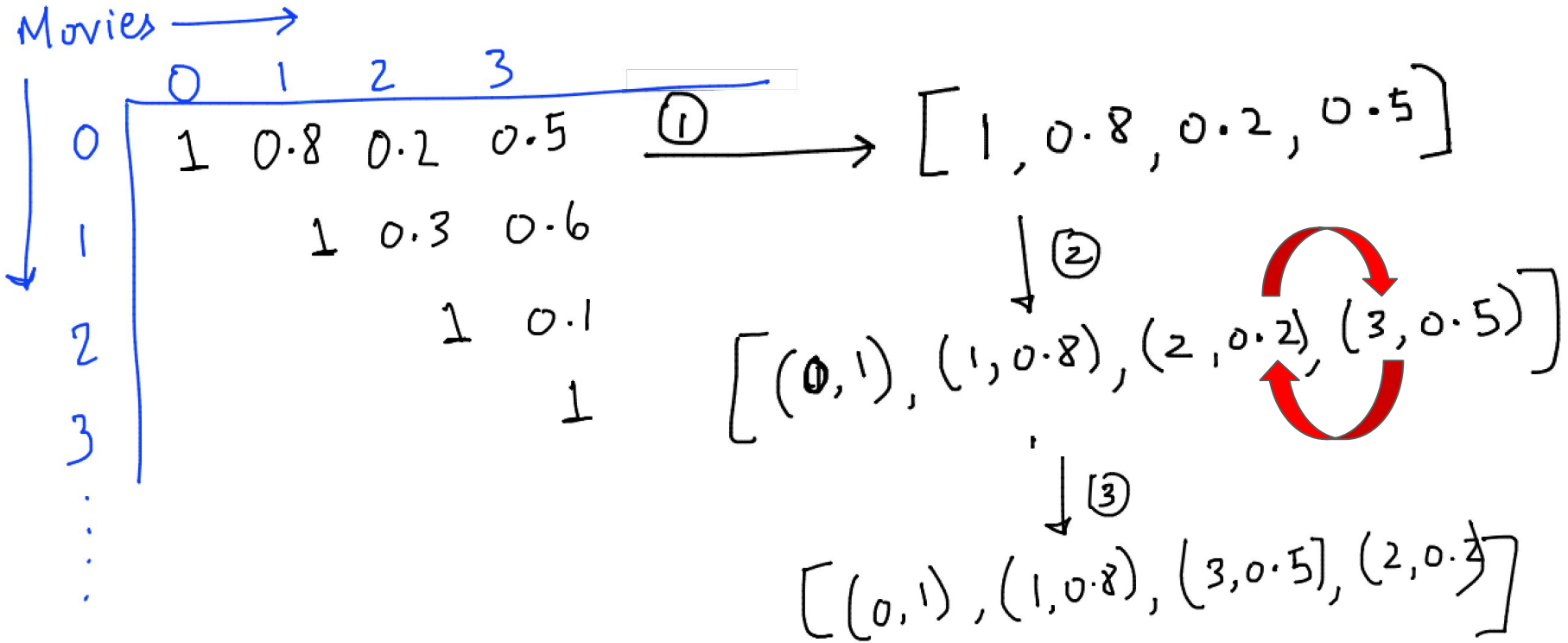
Given the similarity matrix below, which movie is most similar to Movie 0 ?



Let's Build It

http://codeheroku.com/static/workshop/datasets/movie_recommender.zip

http://www.codeheroku.com/static/workshop/hw/movie_recommendation/assignment.pdf

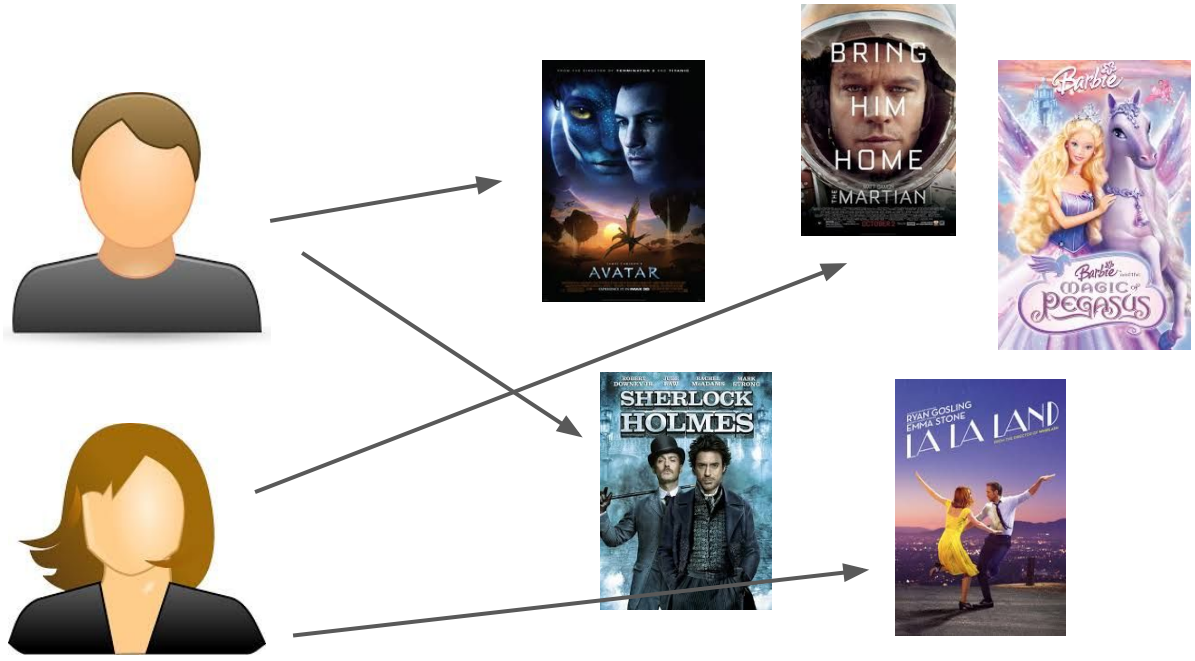

Movies
0 1 2 3
0 1 0.8 0.2 0.5
1 1 0.3 0.6
2 1 0.1
3 1
1
[1, 0.8, 0.2, 0.5]
2
[(0,1), (1,0.8), (2,0.2), (3,0.5)]
3
[(0,1), (1,0.8), (3,0.5), (2,0.2)]

Thank you!

Alternative Links:

DataSet: https://drive.google.com/file/d/1sJ9N2T2zDQwvywHCC6RCO68olL97Mp4O/view?usp=sharing
Assignment: https://drive.google.com/file/d/1EKjBr0id9_HtzGJzrNs8yGZ5MWWExx-b/view?usp=sharing

Recommendation Systems



Users

Items