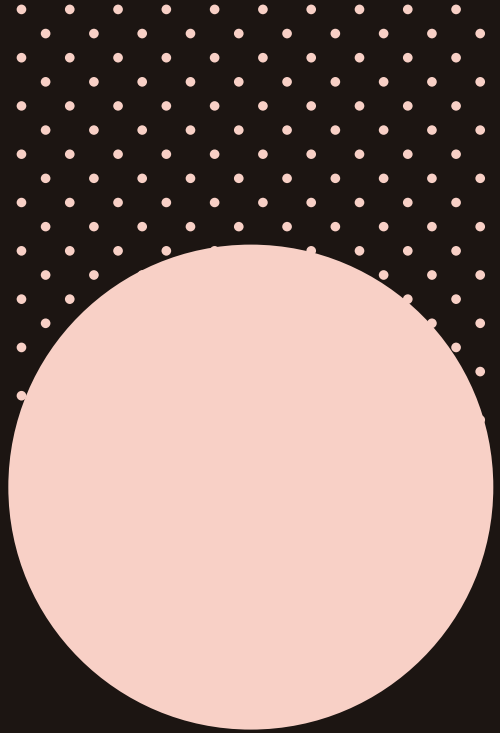


BECHDEL SCORE MOVIE RECOMMENDER

COLE POPPSINGER
04.18.2022

OVERVIEW

01 **BECHDEL TEST**
what is it and why is it important?

02 **RECOMMENDER SYSTEM**
what is a recommender system and how many kinds are there?

03 **DATA**
where did it come from and what does it say?

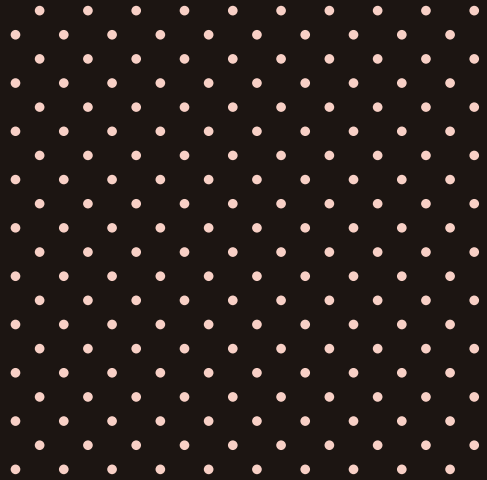
04 **MODEL**
how is the recommender made?

05 **APP**
how does the app work?

06 **NEXT STEPS**
how can the recommender can be improved?

01

BECHDEL TEST



WHAT IS THE BECHDEL (-WALLACE) TEST?

COMIC strip 1985

Allison Bechdel + Liz Wallace
“D*kes To Watch Out For”
started as ‘cult’ conversation topic

COMMON since 2010s

recognised as basic metric of representation in media
iterated upon across demographics

SCORE (0-3)

0- no criteria met
1- at least 2 women
2- who talk to each other
3- about something other than men

Bytes to Watch Out For
PRESENTS
THE RULE
WITH THANKS TO LIZ WALLACE
WANNA SEE A MOVIE AND GET POPCORN?
COMING SOON!
THE MERCENARY
WELL,... I DUNNO. I HAVE THIS RULE, SEE...
I ONLY GO TO A MOVIE IF IT SATISFIES THREE BASIC REQUIREMENTS. ONE, IT HAS TO HAVE AT LEAST TWO WOMEN IN IT..
NOW PLAYING
THE BARBARIAN

...WHO, TWO, TALK TO EACH OTHER ABOUT, THREE, SOMETHING BESIDES A MAN.
THE VIGILANTE
PRETTY STRICT, BUT A GOOD IDEA.
NO KIDDING. LAST MOVIE I WAS ABLE TO SEE WAS ALIEN...
...THE TWO WOMEN IN IT TALK TO EACH OTHER ABOUT THE MONSTER.
RAMBO MEETS GODZILLA
WANNA GO TO MY HOUSE AND MAKE POPCORN?
NOW YOU'RE TALKIN'.

WHY SHOULD I CARE?

REPRESENTATION MATTERS

it matters to you
(whether or not you know)

AND

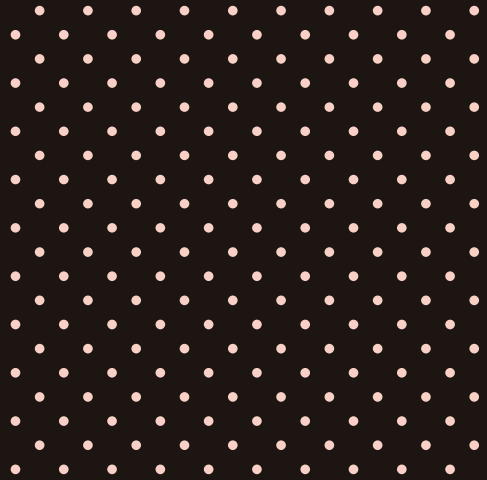
it matters to your customer

WHAT GETS MEASURED GETS IMPROVED

we can’t fix
what we can’t see

02

RECOMMENDER SYSTEM



MOST COMMON RECOMMENDER SYSTEMS

CONTENT

based on common features:
you watched a director's movie;
you'll likely watch her new movie

ITEM-BASED COLLABORATIVE

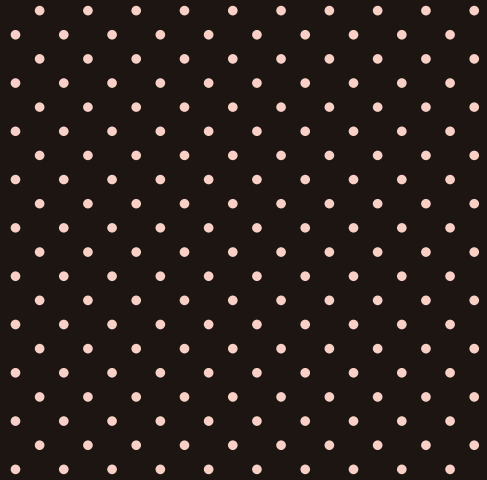
based on common items:
you and they watched movie A,
they watched movie B,
so too should you

USER-BASED COLLABORATIVE

based on common ratings:
you and they liked movie C,
they liked movie D,
you might also

03

THE DATA



DATA MERGE

MOVIELENS RATINGS

100,836 ratings
610 users
scale (0.5 - 5.0)

MOVIELENS LINKS

movieID
imdbId
tmdbId

FINAL COUNT:
~5000 movies
+ bechdel scores
~80,000 ratings

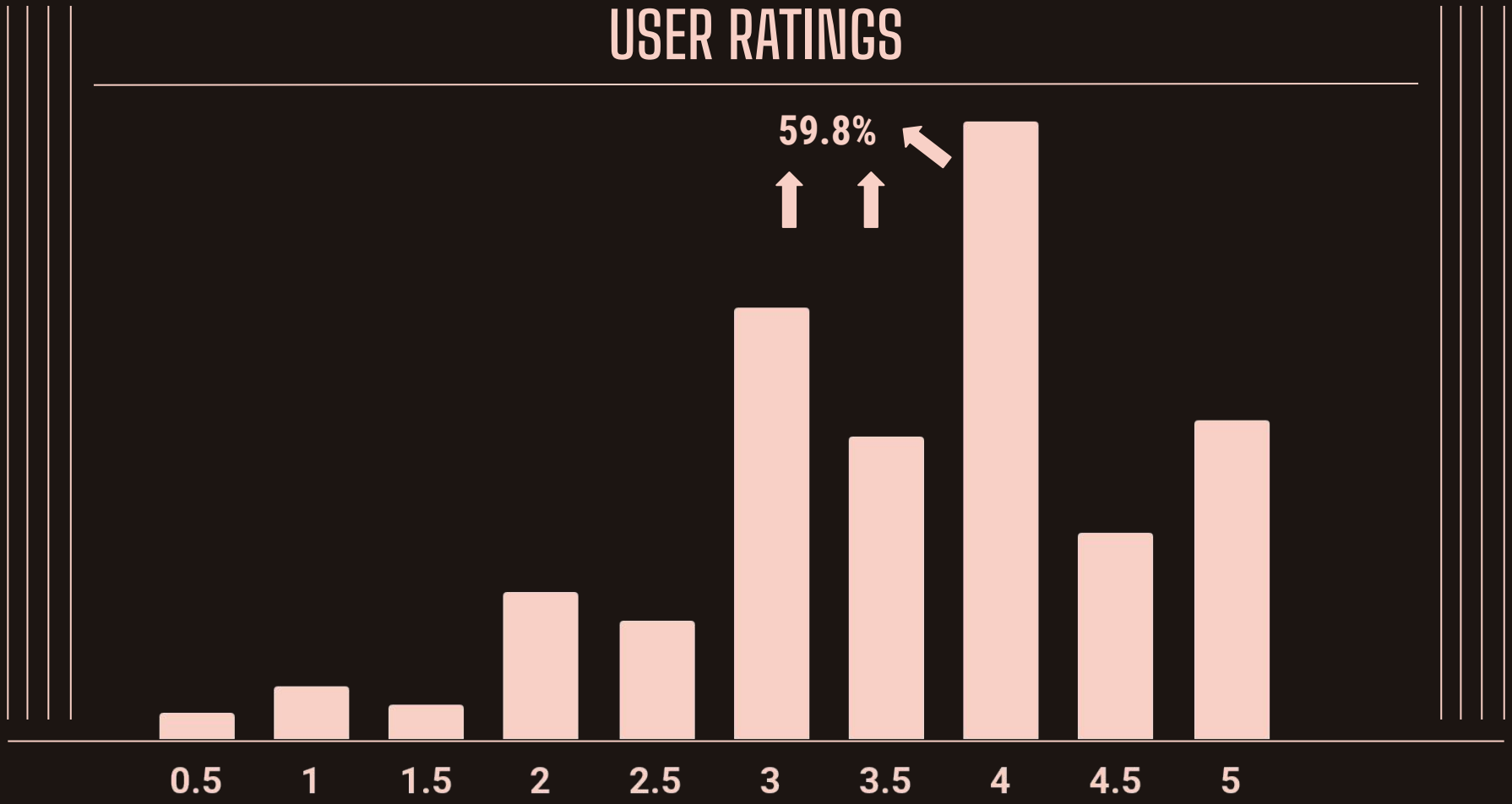
MOVIELENS MOVIES

9742 movies
+ titles + genres
years: 1902 - 2018

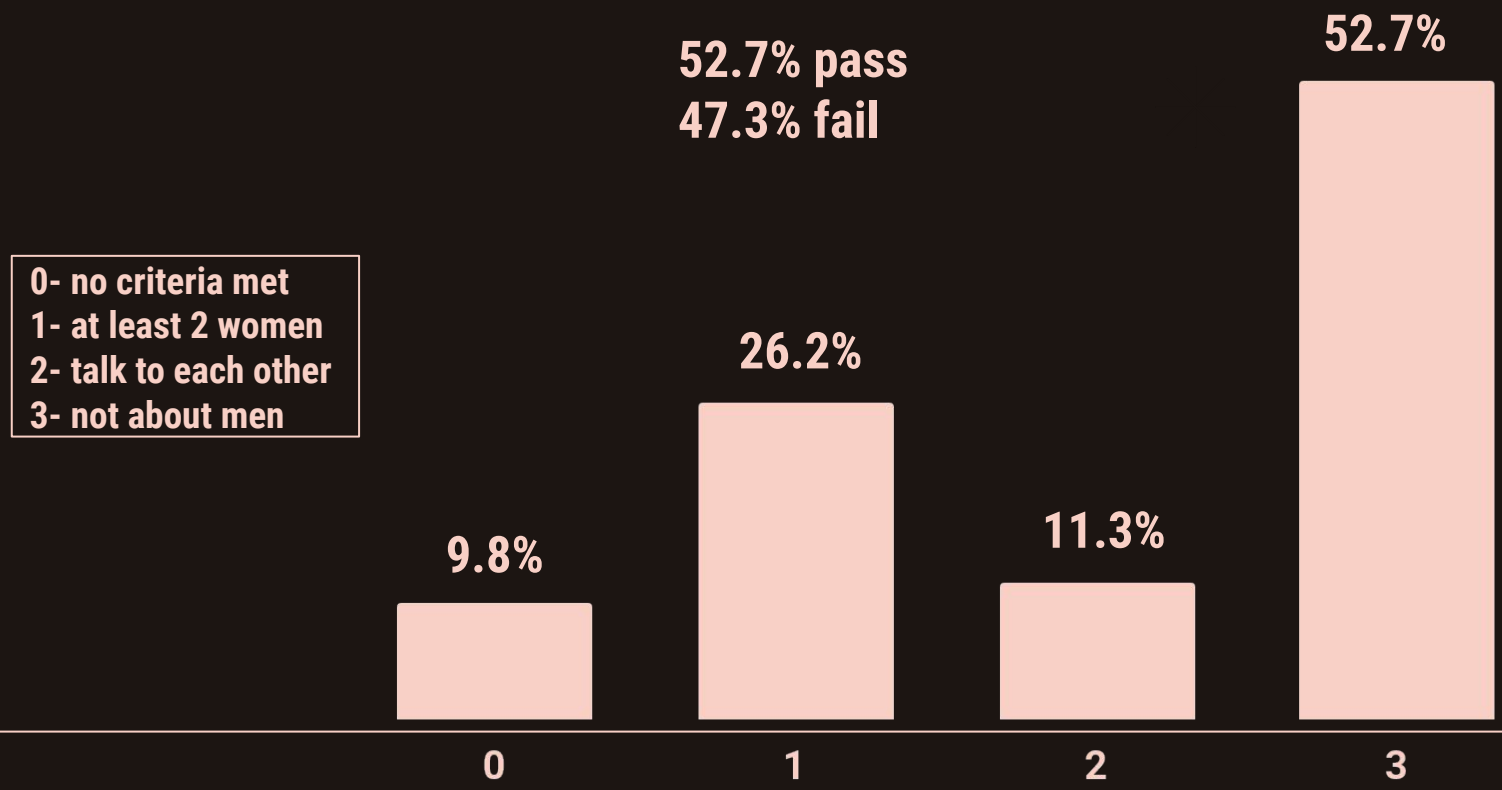
BECHDEL TEST

rated and reviewed by community
9417 movies
score (0 - 3)

USER RATINGS

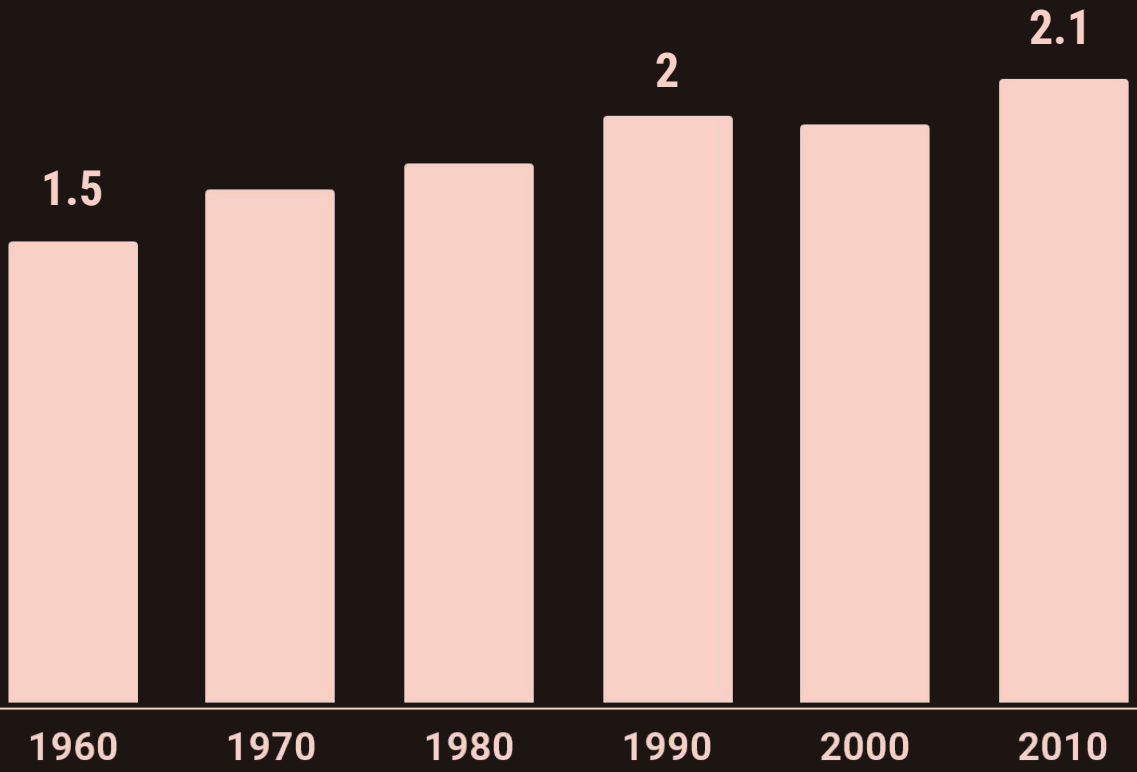


BECHDEL SCORES



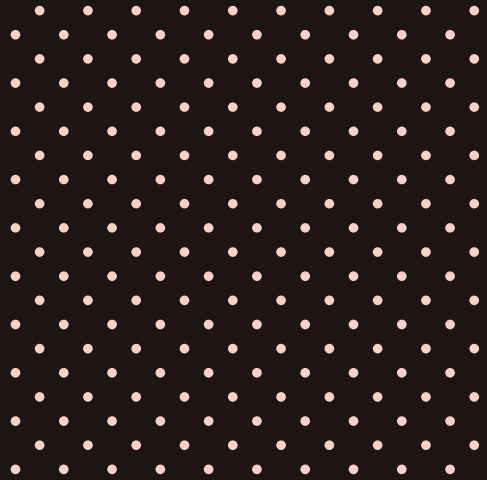
AVG BECHDEL SCORES over time

movies before 1960 have too few bechdel scores for valuable comparison



04

THE MODEL



THE MODEL

PIVOT

make title index
each user as column
ratings are values

SPARSE MATRIX

many zeros allows for
squishing
Reduces file size

COSINE SIMILARITY

pairwise distance
similarity = 1 - distance

DATAFRAME

similarity
movie titles (index)

AND THE BECHDEL SCORE?

bechdel score added to query function

THE MODEL

ITEM-BASED COLLABORATIVE

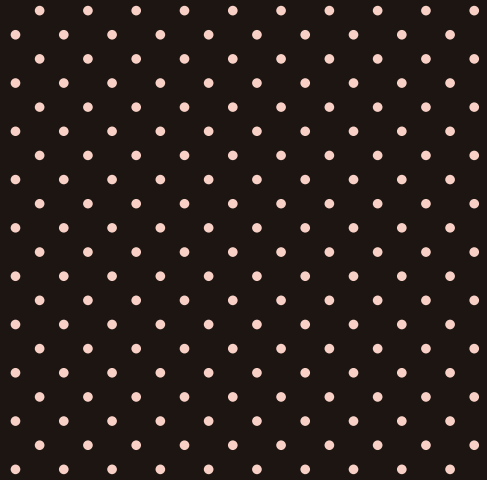
enter random movie,
see other similarly-rated movies
and their bechdel scores

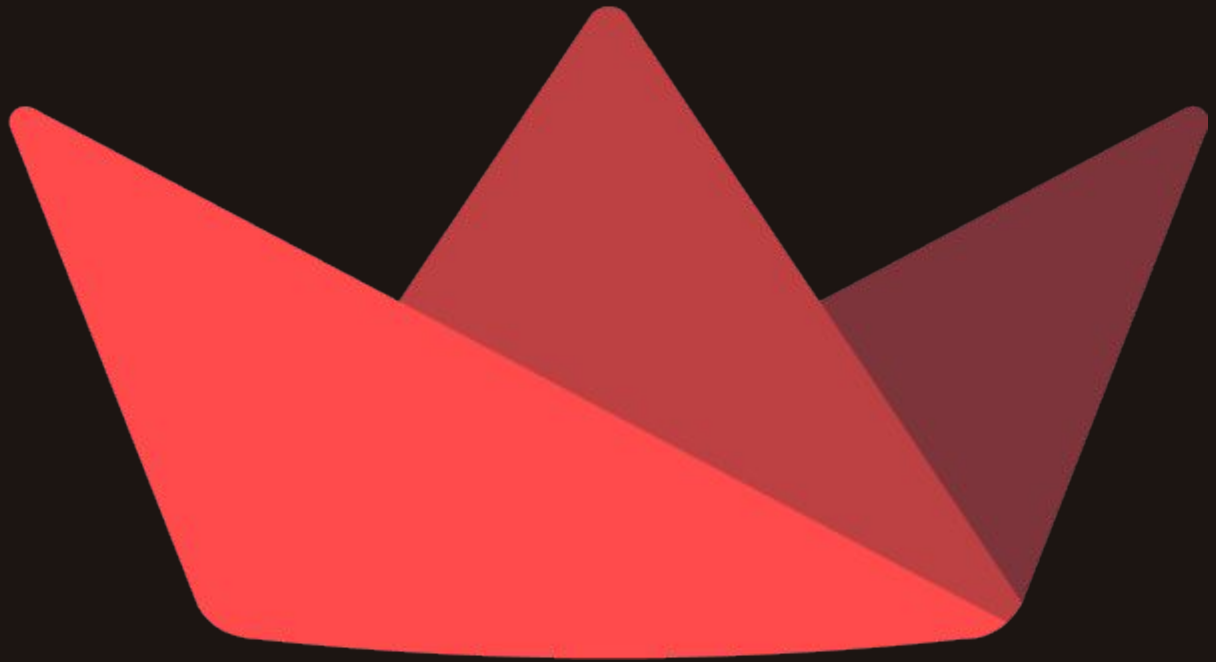
USER-BASED COLLABORATIVE

enter your *favorite movie,
see most common movies by user rating
and their bechdel scores

05

THE APP

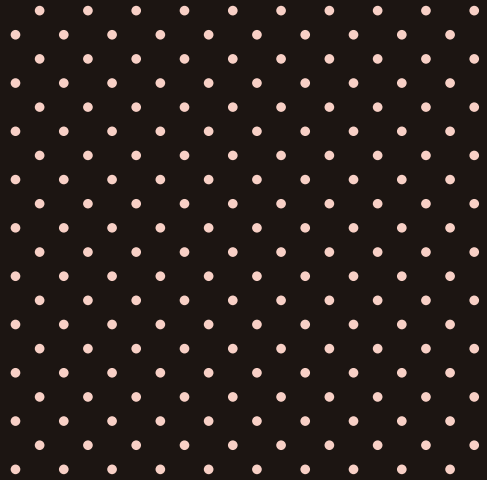




https://share.streamlit.io/colepoppsinger/streamlit/app.py

06

NEXT STEPS



IMPROVEMENTS

MORE INTO MODEL

bigger data
more content components
text analysis(script, reviews)

BETTER APP

streamlined interface
more options to refine search
movie poster + lnk to stream

GREATER REPRESENTATION

broader than bechdel metrics:
race, skin color, lgbtq+, age,
disability, body size, social class

THANK YOU

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

FIN