



The Bechdel Test



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14.05.2021



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Don't leave home without it!

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01

Introduction



Alison Bechdel's "The Rule"





Problem Statement



Can I create a model that can
reliably tell if a screenplay passes
The Bechdel Test?



02

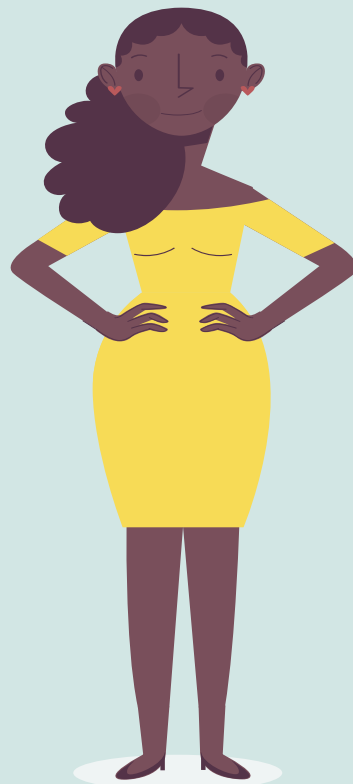
The Data



Data Collection + EDA



- Screenplays
- Bechdeltest.com information
- Lists of common male and female names
- Exploration of gender and names in scripts



Screenplays

- This data made me want to cry. And not because the screenplays were this moving
 - This is really messy data
- Created a function to rename files to the first line of each script
- Merging Dataframes on title drastically reduced the dataset (464 scripts in final dataset)
- Screenplay structure is particular

```

                                SKYLAR
This is your house, right?

Chuckie nods and is about to respond when he is interrupted by a
nagging shriek from his mom.

                                CHUCKIE'S MOM (O.S.)
Get in here, Chuckie!

                                CHUCKIE
                                (calling back)
Pipe down, Ma!

                                SKYLAR
I guess so.

                                CHUCKIE
What? No. This is my mother's house. I
don't live with my mother. I just stop
by, help out. I'm good like that.

                                SKYLAR
Is this a bad time?

                                CHUCKIE
She'll live.
                                (beat)
If she starts yelling again I might have
to run in real quick and beat her with
the stick again but...

                                SKYLAR
Okay.

                                CHUCKIE
Let's take a walk.

EXT. CHUCKIE'S STREET -- DAY

Chuckie, still in his boxers walks with Skylar who is talking.

                                SKYLAR
See, now this doesn't feel right.
                                (beat)
When I made the decision to come over
here it felt right. I had all these
rationalizations... I just don't
understand why Will never tells me
anything, he won't let me get close to
him, he tells me these weird lies--
```


BechdelTest.com

- Used an API to call from the site and retrieved the data
- It was a simple, concise dataframe to work with
 - 8,930 observations
- The Bechdel Test itself leaves room for debate

Bechdel Test Movie List

/bech·del test/ *n.*

1. It has to have at least two [named] women in it
2. Who talk to each other
3. About something besides a man

✖ Good Will Hunting (1997)

This movie passed 0 of 3 tests. It was entered by schwarta on 2009-12-28 23:23:09.

Reviews

- No reviews listed.

Comments

Jason disagreed with the rating and said:

This movie has 3 named characters. Skyler, Cathy, and Kristen(?), though Kristen's name is barely comprehensible the one time it's spoken, and Cathy only has 2 lines exchanging sexual insults with Ben Affleck's character. It's in the bar scene 5 minutes into the movie. Here's the dialogue at the beginning of the scene:

Hi, Will.

Kristen, how you doin'?

I'm alright.

Good...

I didn't get on Cathy last night.

No? Why not?

I don't know...Cathy! Why didn't you give me none of that nasty little hoochie-woochie you usually throw at me?

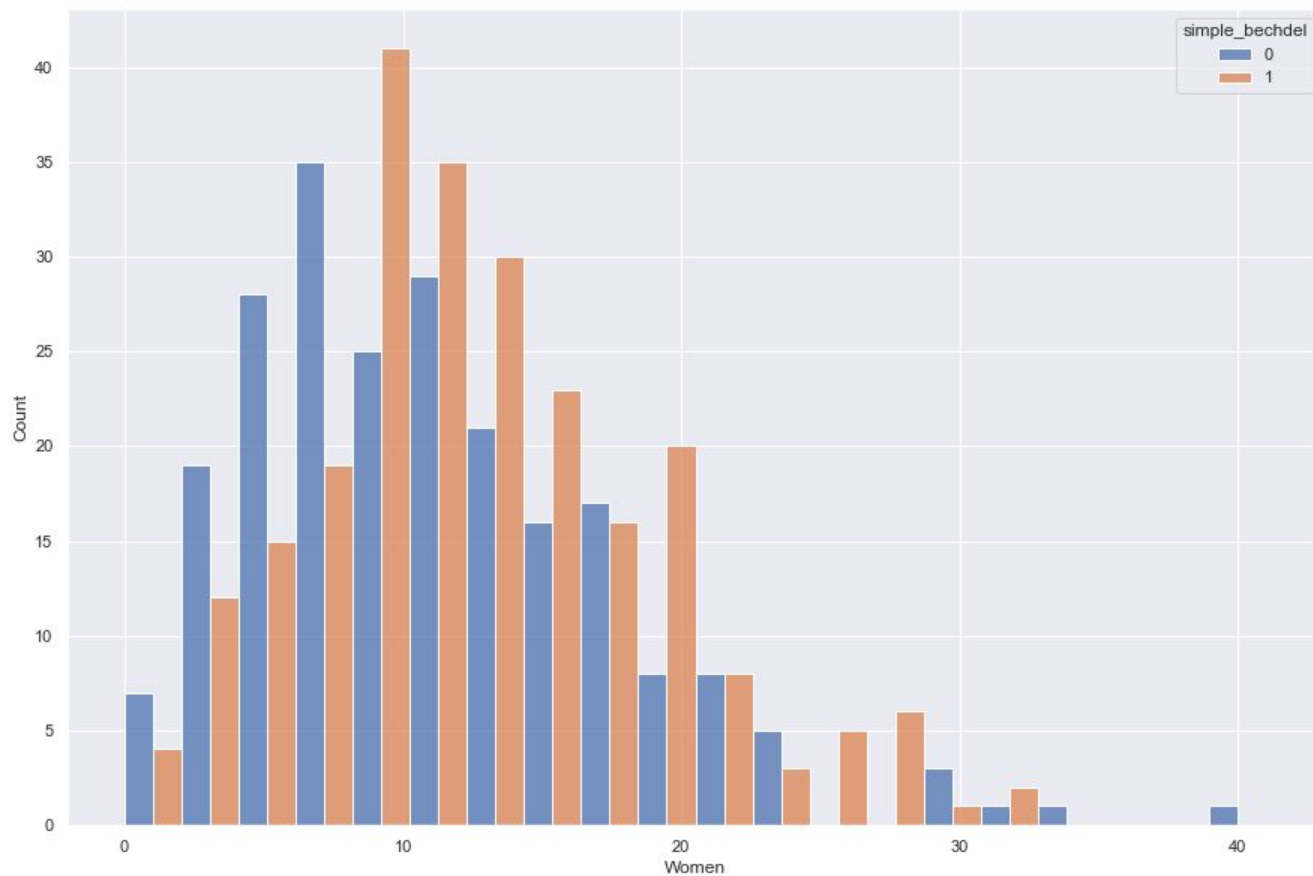
Aw, fuck you, and your Irish curse, Chuckie!

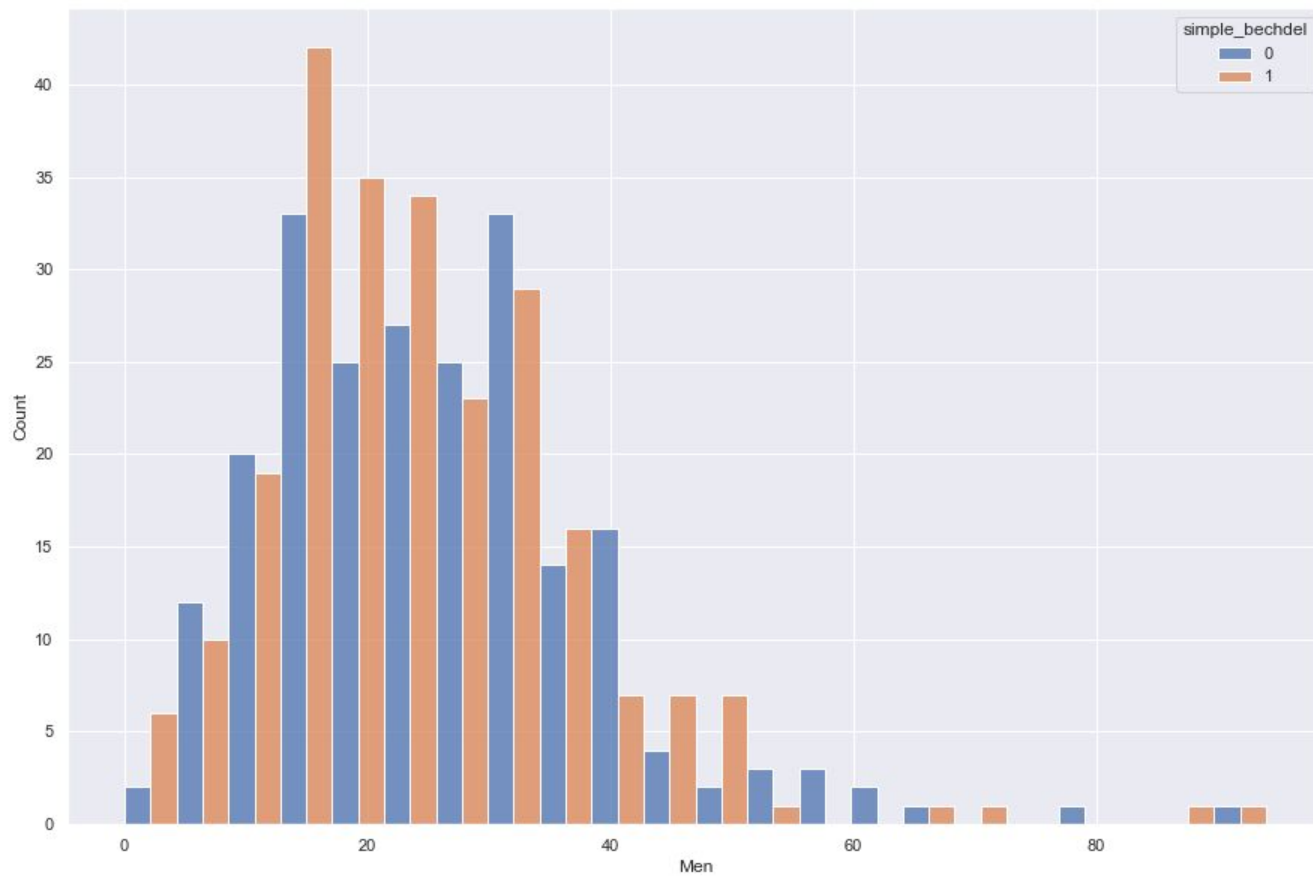
Gender Names

- Generalizing genders of names was required
- Names like Marijuana Pepsi were not considered for this

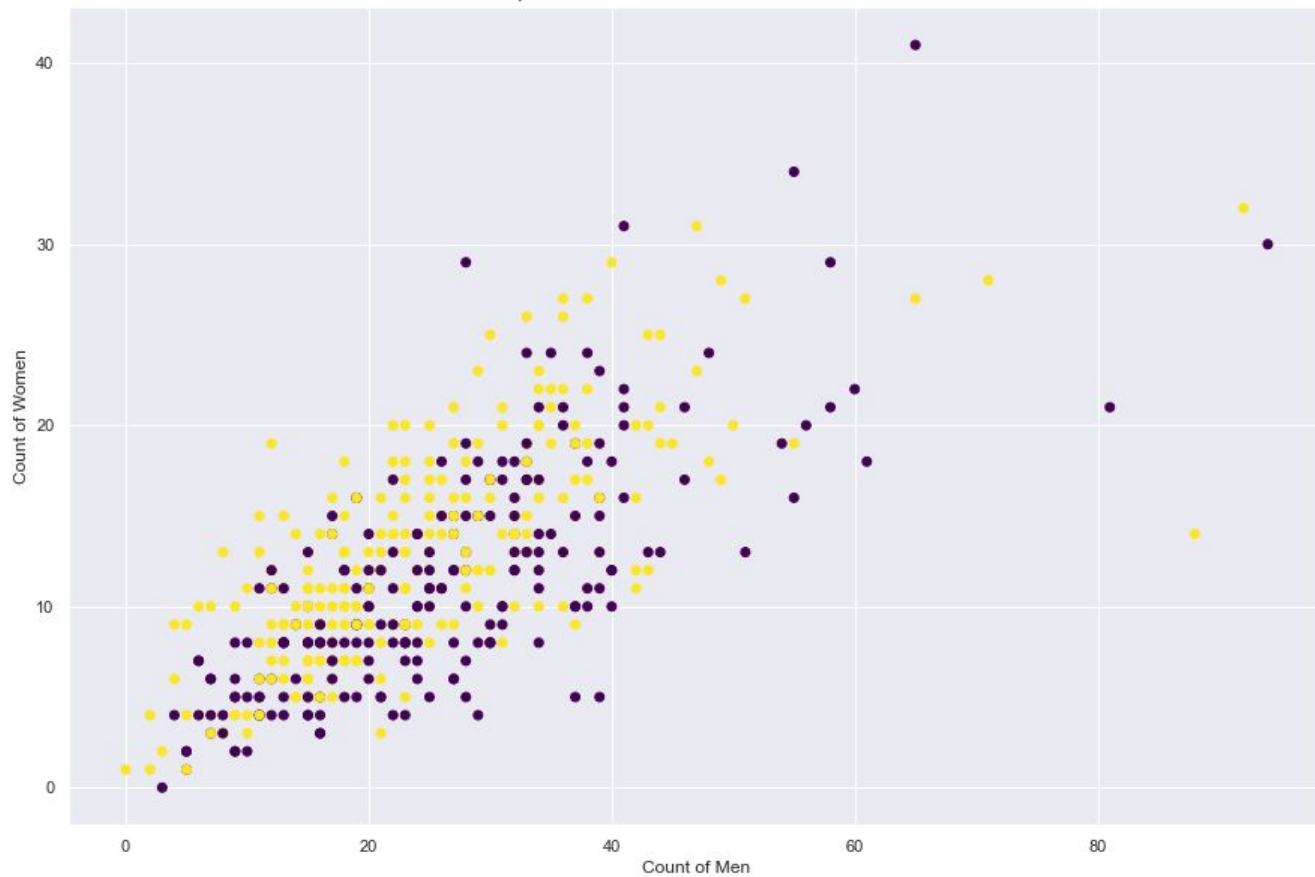
Dr. Marijuana Pepsi Vandyck







Representation of Named Men and Women in Film





03

Modeling

Three small circles are arranged horizontally below the word 'Modeling'. From left to right, they are red, yellow, and grey.

Can You Guess What Passes?



Bechdel Test Classification

- Stop Words, and custom stop words, removed
- Several methods attempted:
 - SpaCy/Tfidf/Logreg
 - LSTM Neural Network
 - NLTK/CVec/Logreg
 - NLTK/Tfidf/Logreg
 - NLTK/Tfidf/Bernoulli Naive Bayes
 - NLTK/Tfidf/K-NN



Model Metrics

Tfidf and Bernoulli NB

	precision	recall	f1-score
0	0.57	0.51	0.54
1	0.57	0.63	0.60
accuracy			0.57
macro avg	0.57	0.57	0.57
weighted avg	0.57	0.57	0.57

Tfidf and Logistic Regression

	precision	recall	f1-score
0	0.62	0.58	0.60
1	0.62	0.66	0.64
accuracy			0.62
macro avg	0.62	0.62	0.62
weighted avg	0.62	0.62	0.62

CVec and K-NN

	precision	recall	f1-score
0	0.49	0.91	0.63
1	0.44	0.07	0.12
accuracy			0.48
macro avg	0.47	0.49	0.38
weighted avg	0.46	0.48	0.37

CVec and Logistic Regression

	precision	recall	f1-score
0	0.62	0.58	0.60
1	0.62	0.66	0.64
accuracy			0.62
macro avg	0.62	0.62	0.62
weighted avg	0.62	0.62	0.62

Rhonda, do you
know what the
Bechdel test is?

No Caroline, but I
think we passed it.



LSTM Neural Network With Char2Vec Speaks! (sort of)

FADE IN:

" told her if she did it again i'd
 break her arm.

 carrie

"

io the mote oo the boose of the
 care oo the boote of the booten of the

FADE OUT.

Word2Vec with LSTM

[illegible][illegible][illegible][illegible]

STREAMLIT TIME!





“It’s not that the Bechdel Test identifies particularly good or feminist films. It’s that it’s a low bar to clear that huge swaths of things simply don’t.”



—Dr. El Sandifer



04

Conclusion



We Need Real Metrics For
Parity



Next Steps



Collect More Data

464 screenplays was not enough



Cleaner Data

Screenplays on the internet are so messy.



Text Gen Components

Train a model for each part of a screenplay



Python Control Flow

You can potentially solve this with just control flow

Conclusion

What is a better test of gender parity?

- Ratio of male to female characters
- Overall screen time of women
- Female characters with fully formed character arcs



The Umaid Evans Test

Does the film have an interracial couple in it?

