

A background image of Jennifer Lawrence as Katniss Everdeen, wearing her signature black and red Hunger Games jacket, with her hair in a braid. The image is slightly out of focus, emphasizing the text overlay.

Topical Exploration of Hunger Games Fan Fiction

Amy Sillman
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The Hunger Games Series



- Series of novels written by Suzanne Collins for the young adult market
- Dystopian vision of North America, post-rebellion
- The brutal government regime (“The Capital”) controls people’s access to food, medicine, and material goods.
- The Capital sponsors an annual Hunger Games where young people from each District fight one another to the death. The lone survivor wins food and comfort.

Why Fan Fiction?



Appeal of The Hunger Games books and films:

- Strong female characters
- Theme of young people rebelling against an older oppressor
- Lots of interesting characters--good, bad, and conflicted!

...good material for fan fiction!

- Stories written by fans of the original books and films (the 'canon')
- A creative outlet for fans who can't get enough of the books
- A way to create new stories, often with secondary characters



Why Fan Fiction?



Katniss in High School

The school I go to is not just any school. It's *Panem High*, the most prestigious school across all of the West Coast. Now you may ask, how did a normal girl like me manage to enroll into a school meant for only the richest and most influential?

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How Finnick and Annie Met

Annie's two years younger than me, but also two years older than Coral. Out of all Coral's friends I like Annie the most. She actually looks out for Coral and takes care of her. Coral's other friends really annoy me. They never invite Coral over to their houses. They always insist on coming to ours and when they do they're usually ignoring Coral and try to catch my attention. It's kind of pathetic. But Annie's a sweet girl.

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Effie Trinket Joins the Rebellion

"Sweetheart, that information... It's best if you pretend you never heard it."

"No. I've spent too long hating everything about this situation and doing nothing. If I can help in some way, even just passing along pieces of information, then I want to do it."

"Effie," Haymitch says seriously. "This isn't a game. If the wrong person finds out what you know you'll be dead."

Why Fan Fiction?



What are the topics and characters that appear in Hunger Games fan fiction?

Do Hunger Games fan fiction writers like to write about secondary characters?



Description of Data



Story texts were scraped from:

<https://www.fanfiction.net/book/Hunger-Games/>

~3400 stories (filtered for stories in English, with Katniss in them)

Each story 3,000->100,000 words

Text analysis caveats

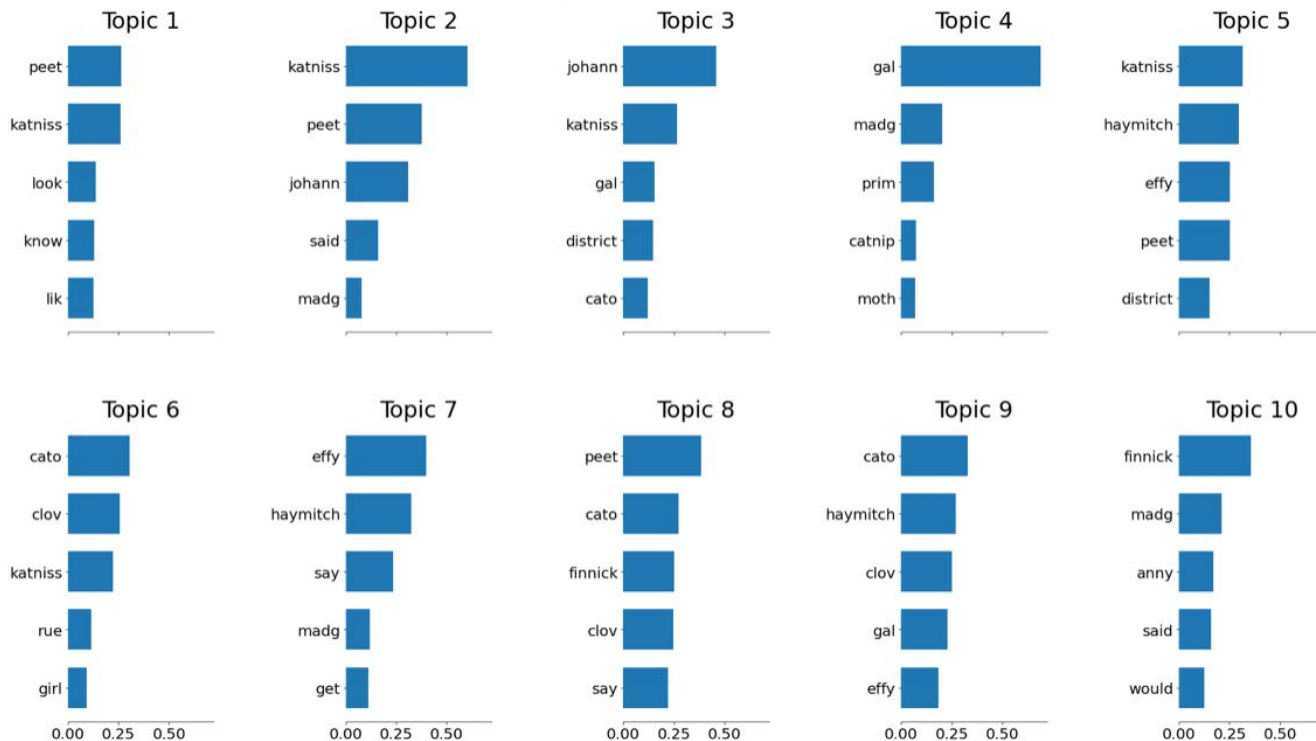
- Many nouns in the canon are slight variations on American English words (e.g.: morphling (morphine), muttations (mutations))
- Many names in the canon are close to currently-used American English names: (e.g. Haymitch, Peeta), and others are not recognizable as names (Marvel, Clove, Enobaria, Glimmer, Coriolanus), making parts of speech tagging challenging.

- Scrape story text (Web Scraper Chrome extension)
- Place into a Pandas DataFrame
- Remove punctuation, replace capital letters
- Remove stop words
- Stem words using Lancaster Stemmer
- Vectorize with sklearn TF-IDF
- Topic modeling in sklearn: LSA, NMF, LDA

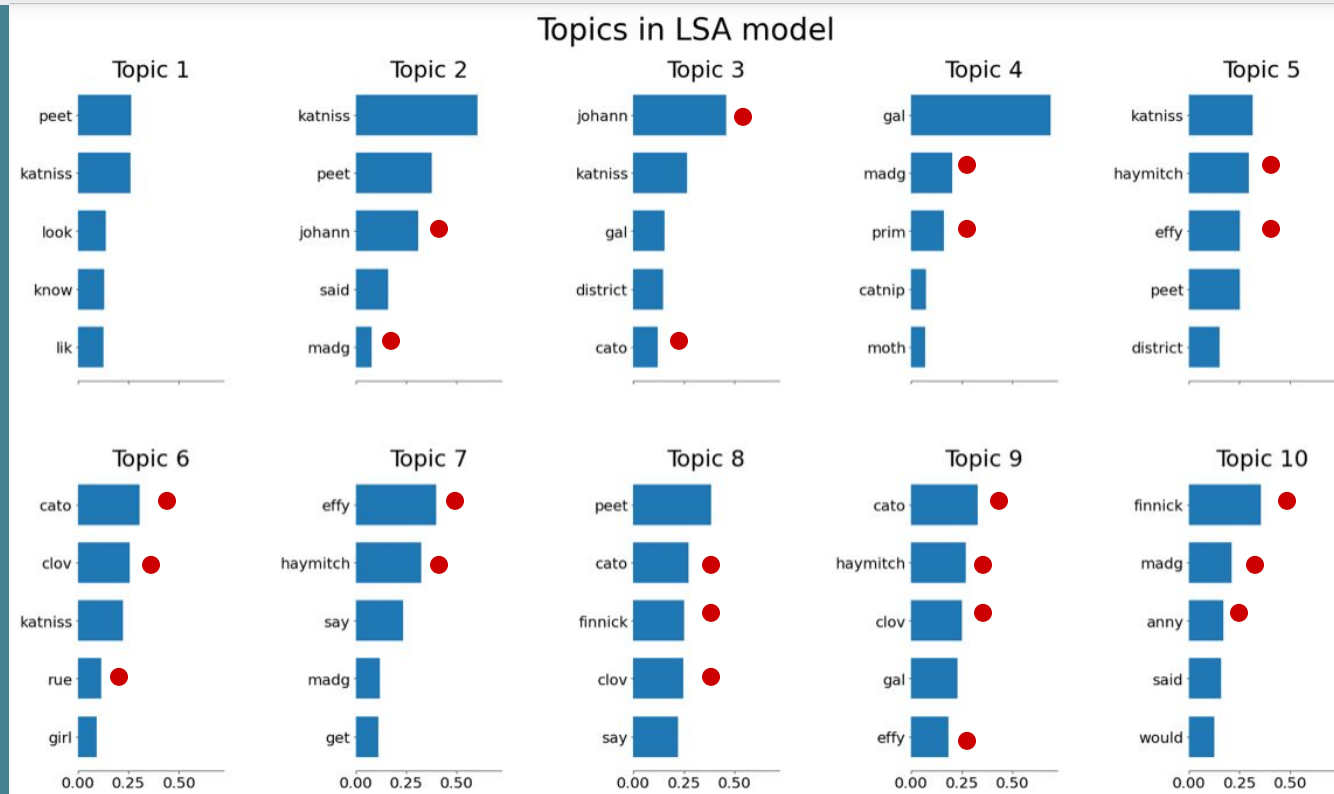
Insights from Topic Modeling: LSA



Topics in LSA model



Insights from Topic Modeling: LSA

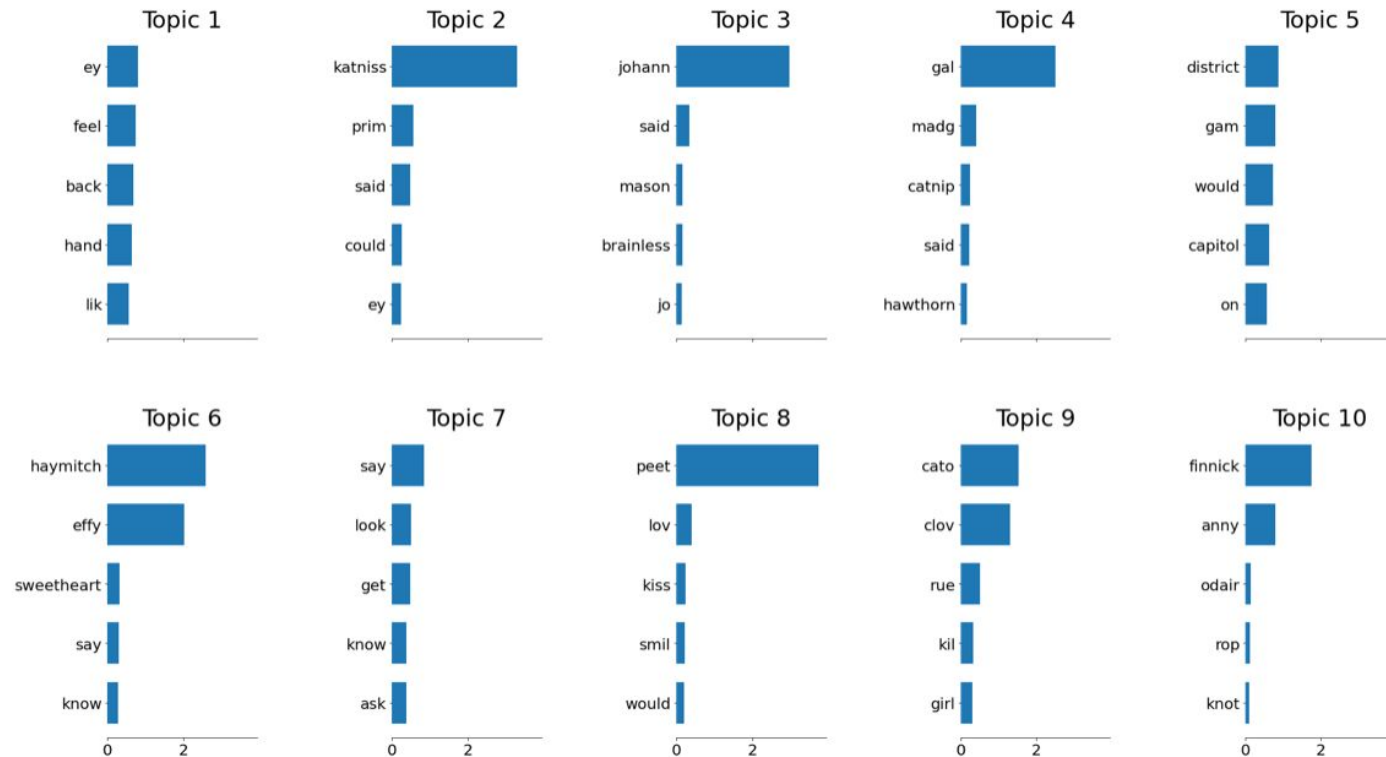


A mix of characters as components in each topic, many secondary characters

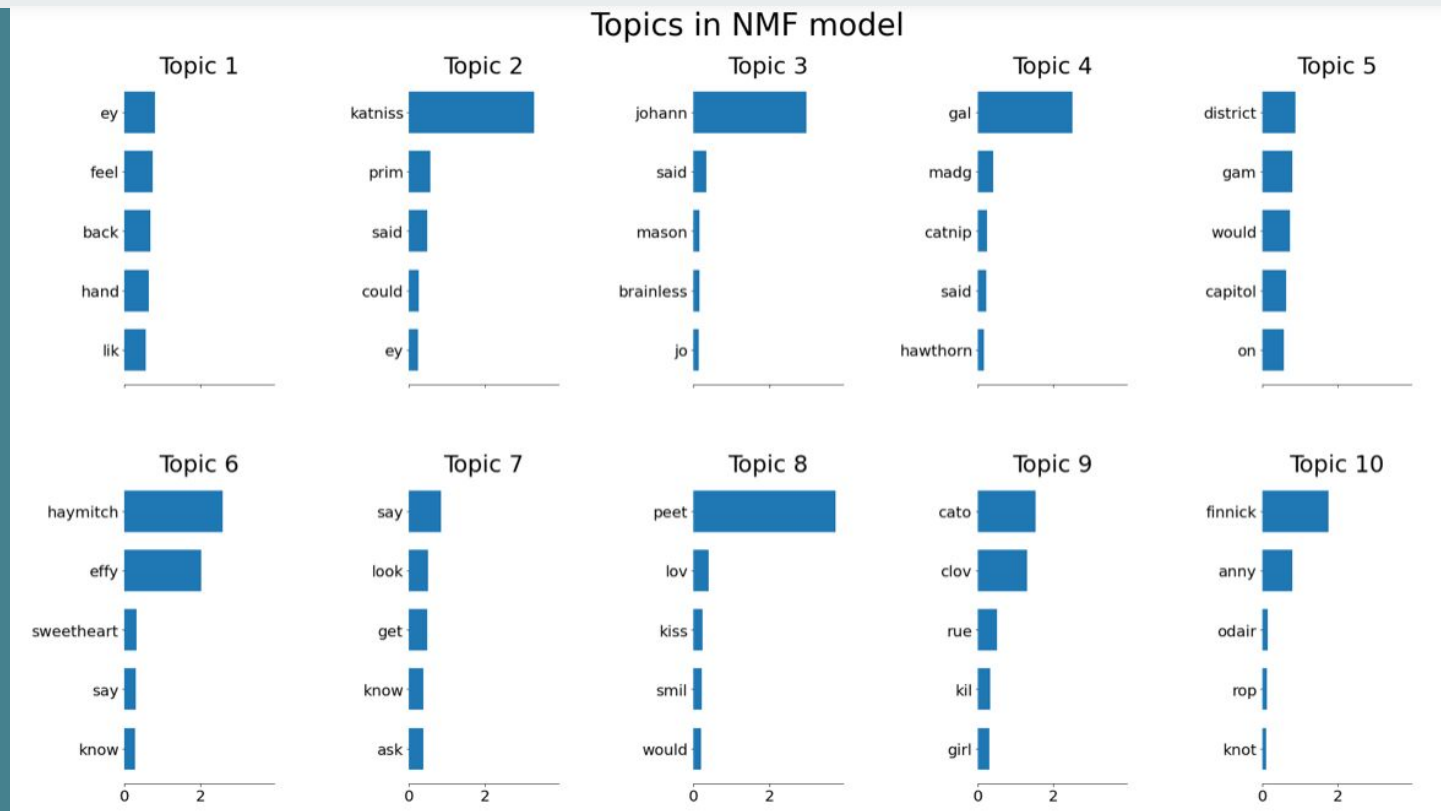
Insights from Topic Modeling: NMF



Topics in NMF model



Insights from Topic Modeling: NMF

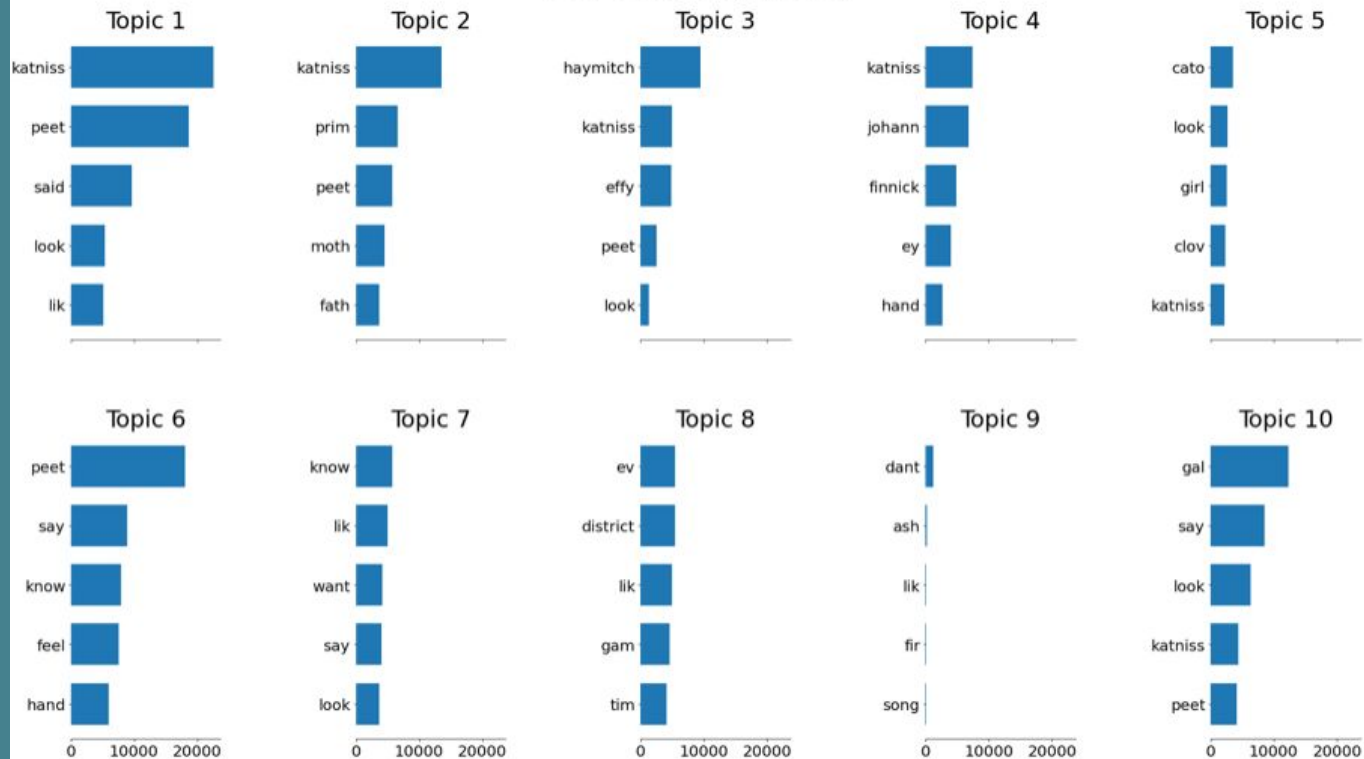


Most topics dominated by one or two components, usually characters

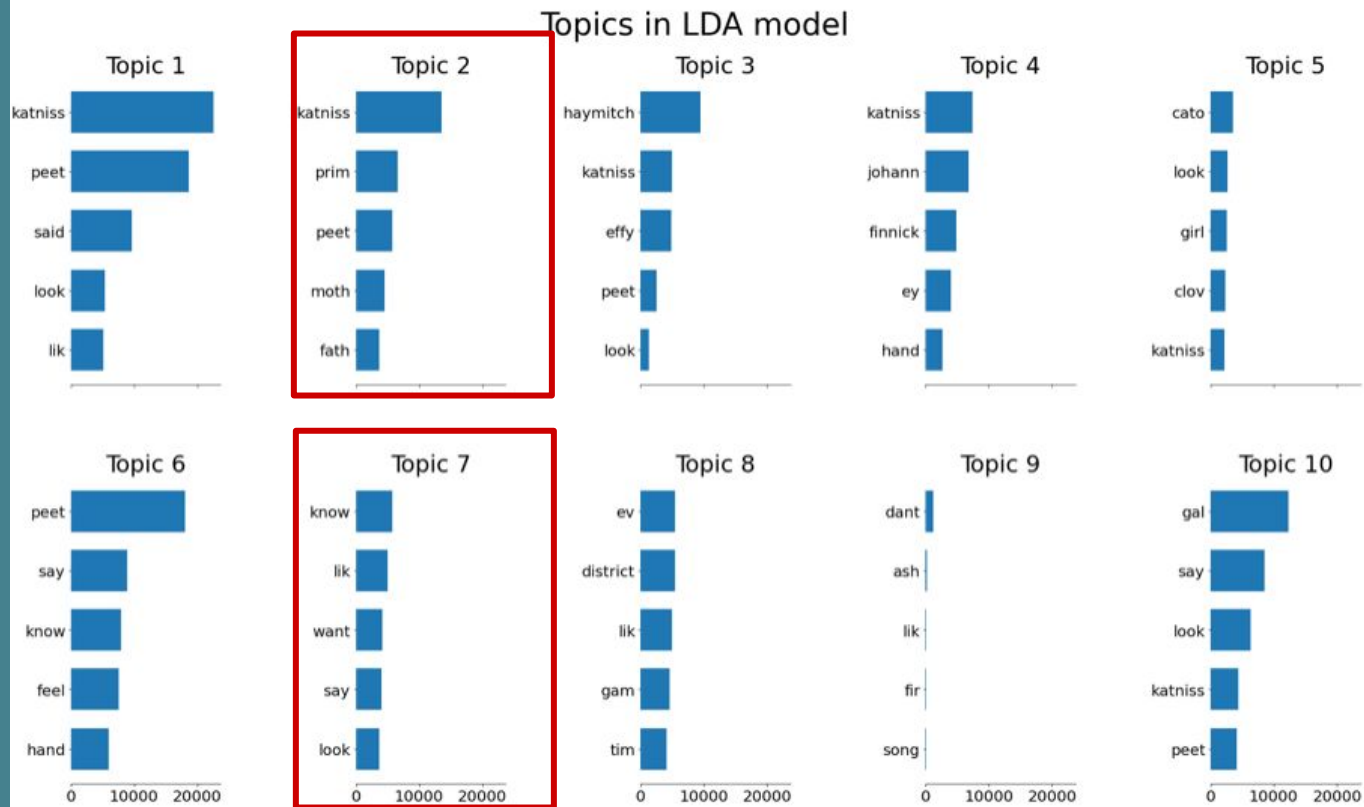
Insights from Topic Modeling: LDA



Topics in LDA model



Insights from Topic Modeling: LDA



Topic 2: home life in District 12, Topic 7 all verbs

- The three different models examined all show different Topics and ranges of components
- LSA is probably the most useful; Topics consist of character combinations. Each Topic has a little different dynamic
- In the NMF model, Topics have one or two dominant components
- LDA is interesting because a Topic representing home life in District 12, but also other Topics are dominated by verbs.

- The three different models examined all show different Topics and ranges of components
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- In the NMF model, Topics have one or two dominant components
- LDA is interesting because a Topic with Prim and mother/father appears, but also other Topics are full of words like 'know', 'like', and 'say'

Running several different models is useful, as different/interesting Topic component combos may appear in different models.

As demonstrated by the different character combos in each Topic in the LSA modeling, people like to write about characters other than Katniss!

Thank you!
(And may the odds be ever in your favor!)



LSA Topic Components



```
#LSA
```

```
display_topics(lsa, cv_tfidf.get_feature_names(), 10)
```

Topic 0

peet, katniss, look, know, lik, say, back, on, ey, ev

Topic 1

katniss, peet, johann, said, madg, gal, finnick, prim, jo, christmas

Topic 2

johann, katniss, gal, district, cato, tribut, clov, prim, gam, said

Topic 3

gal, madg, prim, catnip, moth, fath, katniss, rory, hunt, hawthorn

Topic 4

katniss, haymitch, effy, peet, district, gam, tribut, capitol, would, vict

Topic 5

cato, clov, katniss, rue, girl, ey, glim, marvel, prim, school

Topic 6

effy, haymitch, say, madg, get, look, ask, dad, school, door

Topic 7

peet, cato, finnick, clov, say, anny, district, rue, kil, gam

Topic 8

cato, haymitch, clov, gal, effy, finnick, rue, knif, katniss, back

Topic 9

finnick, madg, anny, said, would, knew, could, felt, friend, mad

LDA Topic Components



```
#LDA
```

```
display_topics(lda, tf_vectorizer.get_feature_names(), 10)
```

Topic 0

katniss, peet, said, look, lik, ey, hand, ev, tim, want

Topic 1

katniss, prim, peet, moth, fath, lov, ey, look, lik, year

Topic 2

haymitch, katniss, effy, peet, look, say, know, capitol, vict, think

Topic 3

katniss, johann, finnick, ey, hand, look, lik, anny, fac, head

Topic 4

cato, look, girl, clov, katniss, said, district, lik, year, gam

Topic 5

peet, say, know, feel, hand, ey, look, want, lov, lik

Topic 6

know, lik, want, say, look, tim, ev, real, tel, ask

Topic 7

ev, district, lik, gam, tim, know, capitol, ey, nev, real

Topic 8

dant, ash, lik, fir, song, burn, step, heart, noth, thought

Topic 9

gal, say, look, katniss, peet, madg, lik, ask, smil, know

NMF Topic Components



```
#NMF
display_topics(nmf_model, cv_tfidf.get_feature_names(), 10)

Topic 0
ey, feel, back, hand, lik, know, fac, ev, tim, look

Topic 1
katniss, prim, said, could, ey, look, felt, sist, would, hand

Topic 2
johann, said, mason, brainless, jo, katniss, fuck, ax, anny, get

Topic 3
gal, madg, catnip, said, hawthorn, know, hunt, rory, back, prim

Topic 4
district, gam, would, capitol, on, year, tribut, ev, moth, reap

Topic 5
haymitch, effy, sweetheart, say, know, look, back, said, train, capitol

Topic 6
say, look, get, know, ask, prim, lik, madg, us, school

Topic 7
peet, lov, kiss, smil, would, want, said, baby, ask, arm

Topic 8
cato, clov, rue, kil, girl, glim, marvel, knif, district, thresh

Topic 9
finnick, anny, odair, rop, knot, beet, katniss, lik, beach, ey
```

Next Steps



- Work on taking out stop words such as 'like', 'want', 'say' or 'no'. These words don't give any information in this context
- Once we have the character combination, look further down the list of components, there may be some words that differentiate the topics further.
- Visualizations--get a better idea of character dynamics in the stories
- See how the stories have changed over time--may be challenging, as people go back and edit their stories

