Ron the Death Eater: Plotting characterization from canon to fanfiction

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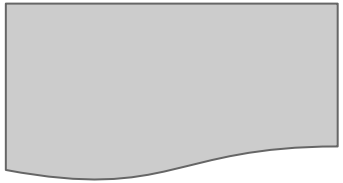
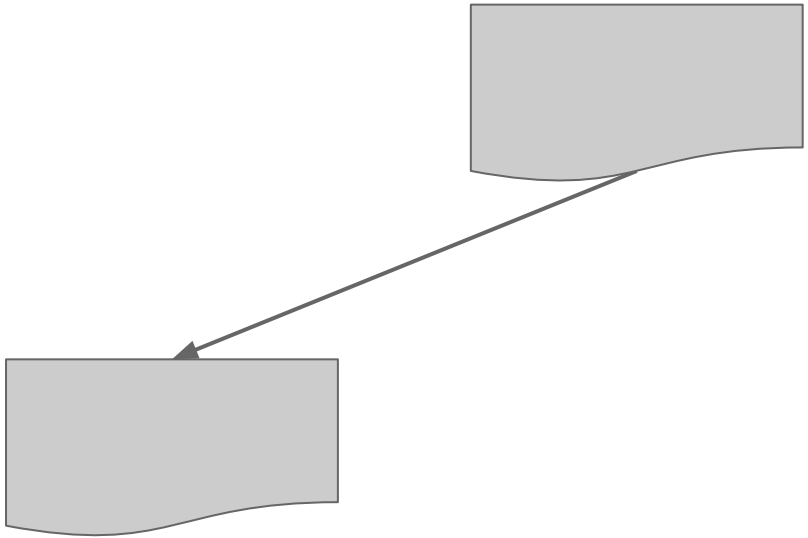
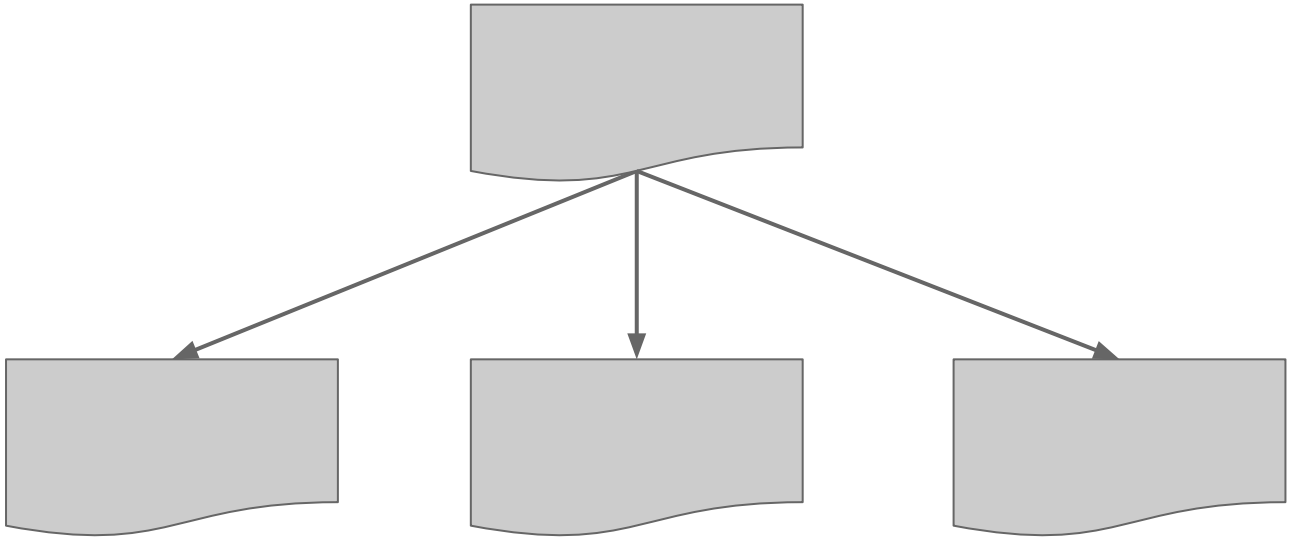
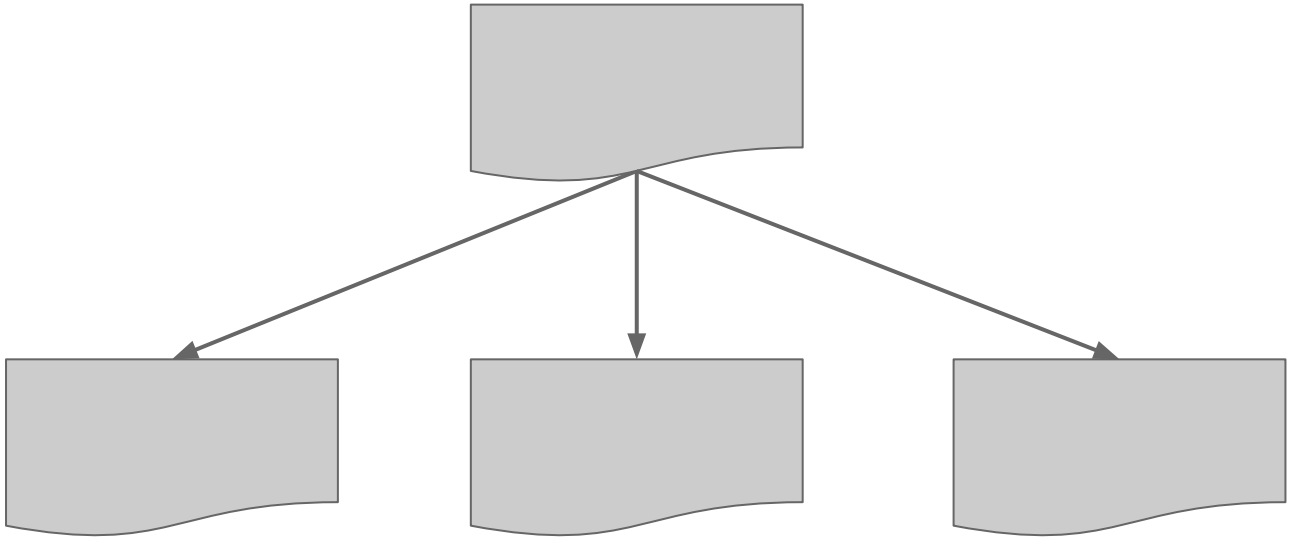
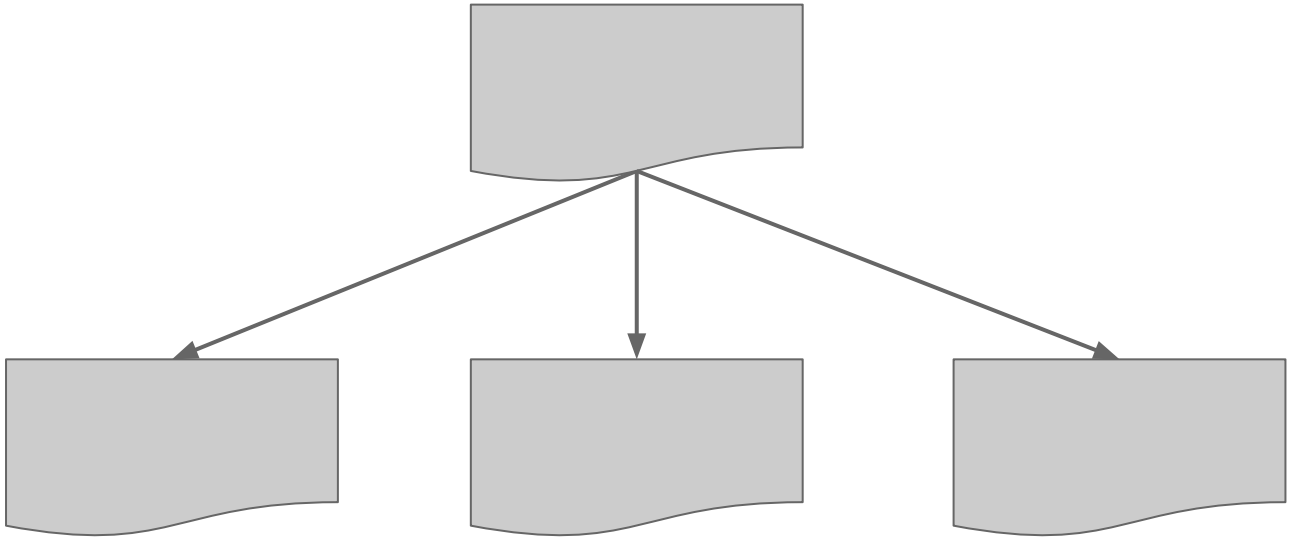




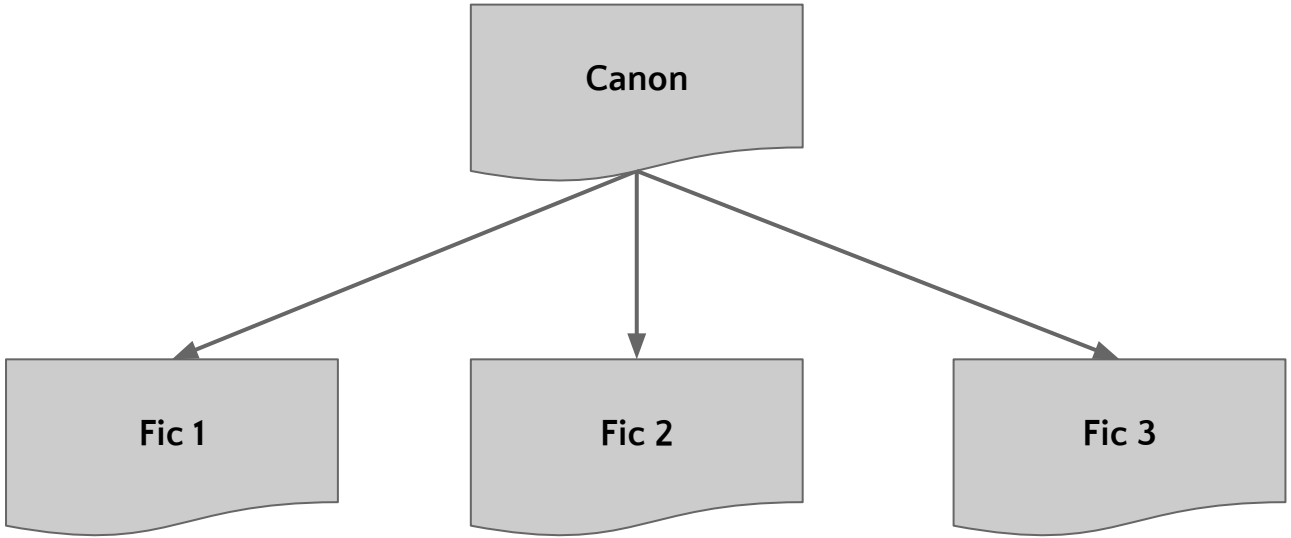




Can we measure how entities are being represented differently in related texts?



Can we measure shifts in how characters are presented from original media to fanfiction?



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Fanfiction

- Fan-written stories based on original books, movies, TV shows, comic books, etc

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- Popular since at least the 1970s, now online on sites such as Fanfiction.net and Archive of Our Own (**AO3**)
- Focus on secondary characters, female characters (Milli and Bamman 2016)

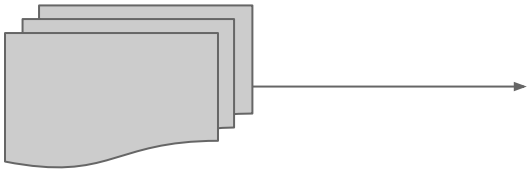
Methods

Word embeddings

Word embeddings

- Numeric vector representations of words from a corpus (Mikolov et al. 2013)

Word embeddings



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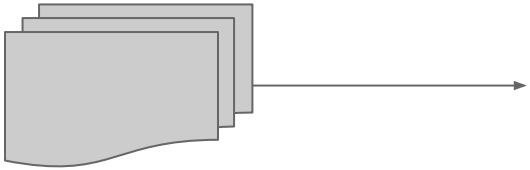

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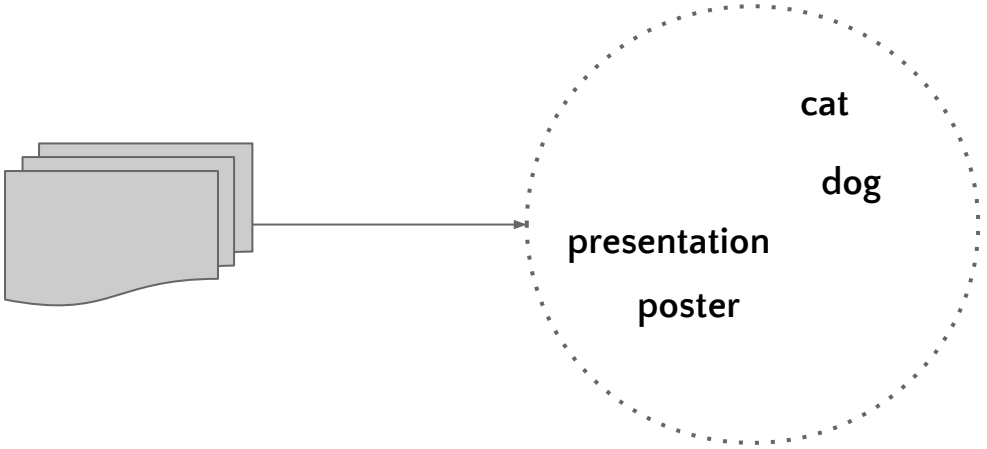
- Numeric vector representations of words from a corpus (Mikolov et al. 2013)
- Similar to LSA (Deerwester et al. 1990), LDA (Blei et al. 2003)

Word embeddings



- Numeric vector representations of words from a corpus (Mikolov et al. 2013)
- Semantically "similar" words will have "similar" vectors, appear in similar contexts

Word embeddings

- Predict a word from its context (training embeddings)

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noam chomsky was certainly someone .

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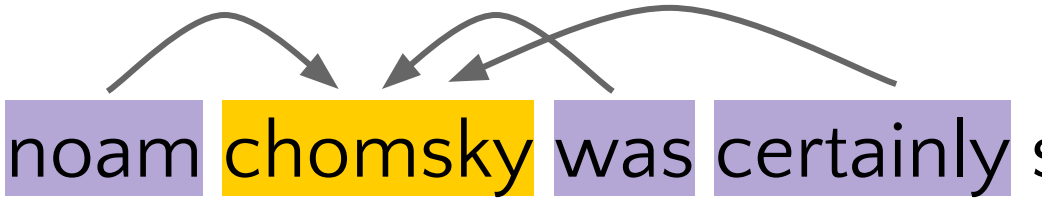

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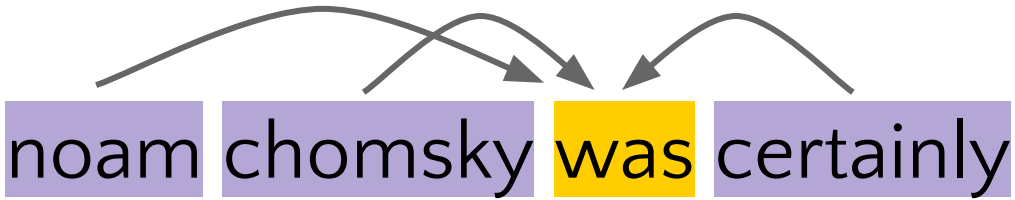

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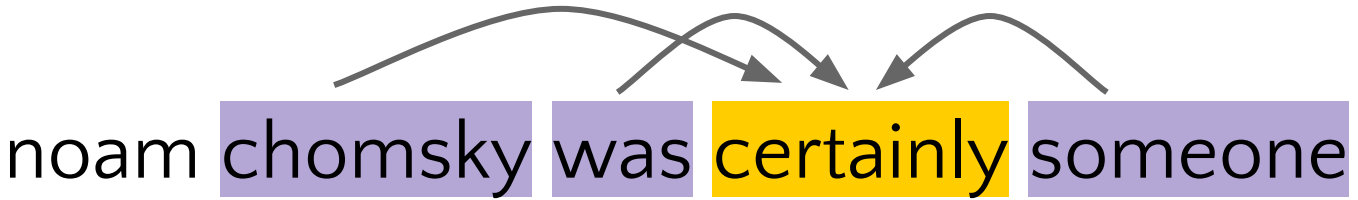

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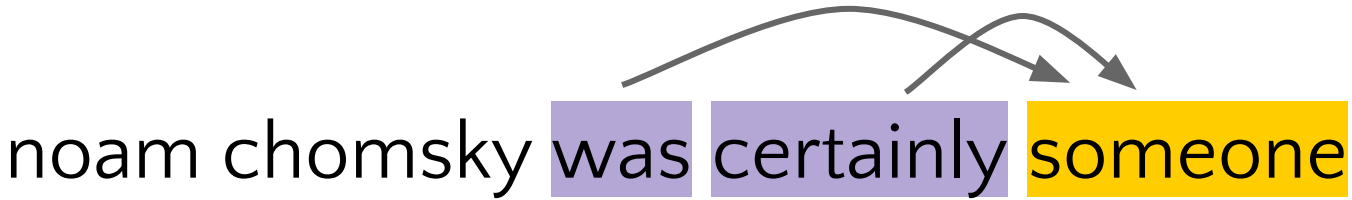

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- Recent applications to social meaning in language:
  - Analyze stereotypes and bias in corpora (Garg et al. 2018)
  - Framing of concepts by different online communities (An et al. 2018)
- Can word embeddings capture the framing of characters in fanfiction?

Methodological options

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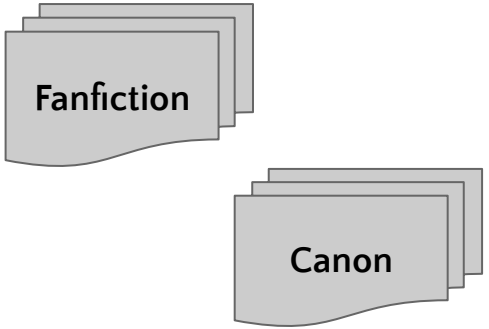
- Embedding space construction



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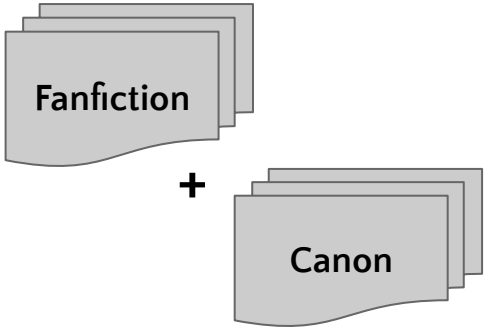

Methodological options

- Embedding space construction
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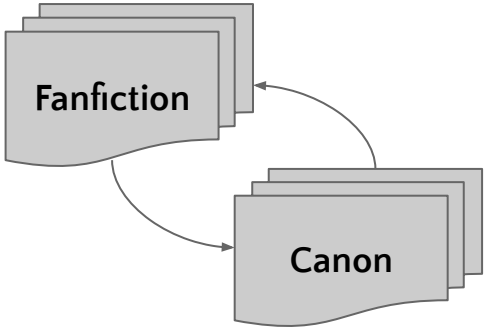
  - Align embedding spaces



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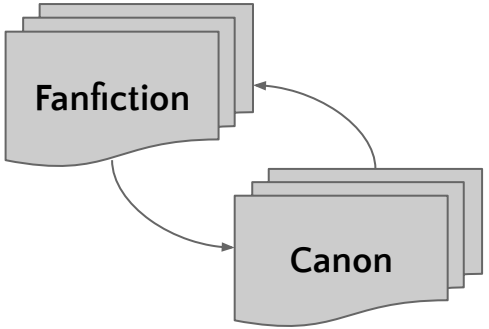
- Need story-specific embeddings for characters



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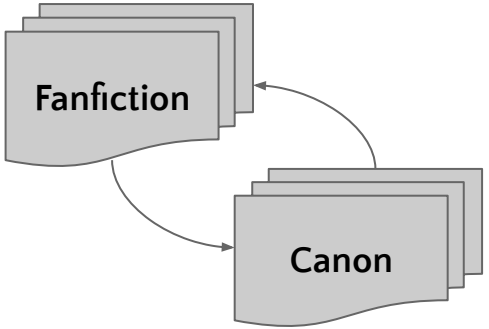

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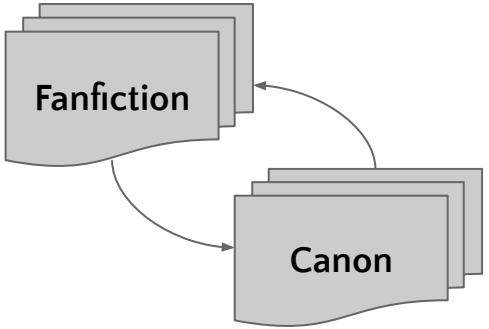

- Embedding space construction
  - Build a combined embedding space
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- Need story-specific embeddings for characters
  - Average word embeddings in context window around mentions of a character name
  - Learn contextualized embeddings (Peters et al. 2018, Devlin et al. 2018)

Data

Data from AO3

Harry Potter fics

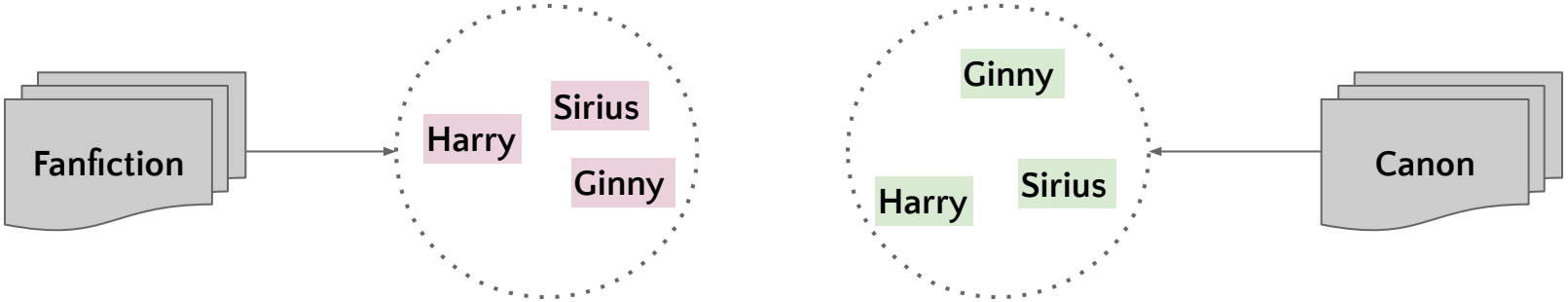
- Large, book-based fandom
- Selected fics with 1k-5k words
- 42,792 fics

Experiments

Character representations

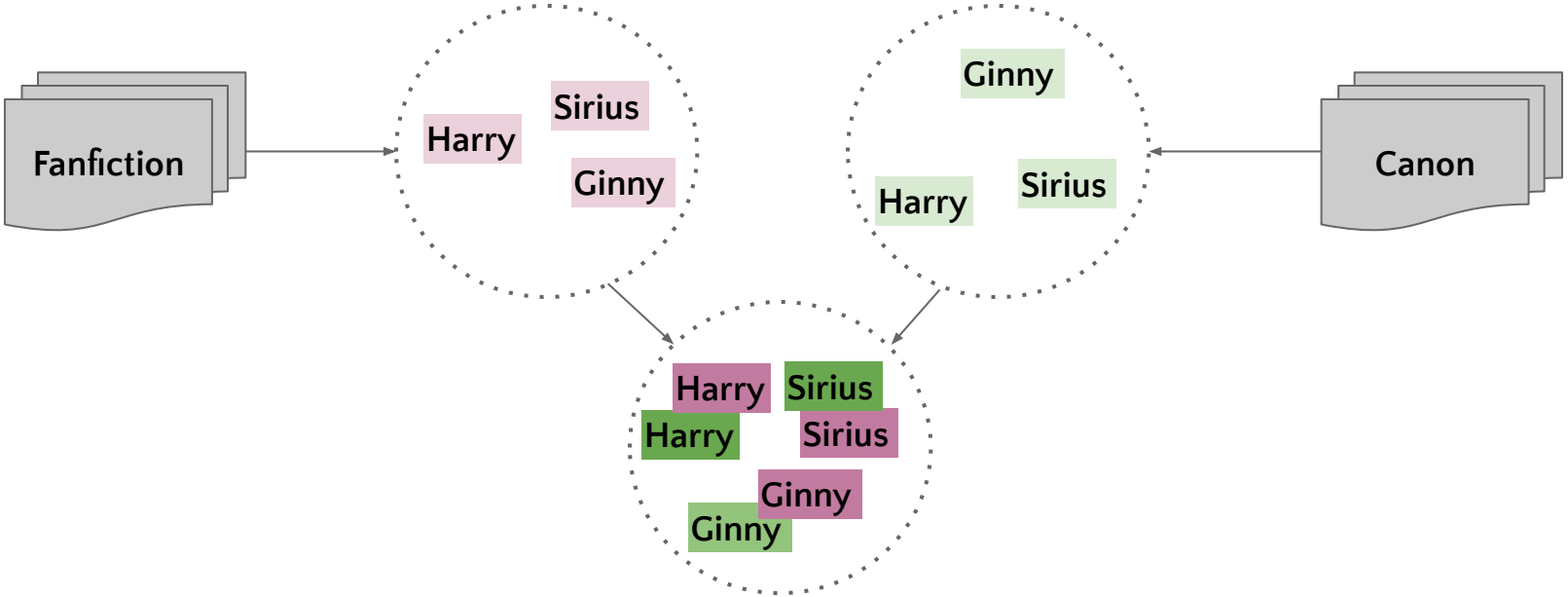
- Goal: Build a representation for each character in each fic to compare with that character's representation in canon

Character representations



- Trained canon and fanfiction embedding spaces separately

Character representations



- Trained canon and fanfiction embedding spaces separately, then aligned to a unified "background" space (Mikolov et al. 2013b)

Character representations

Hermione sat in the front of the classroom. She…

Fleur whistled softly. "***Hermione***! Come here…

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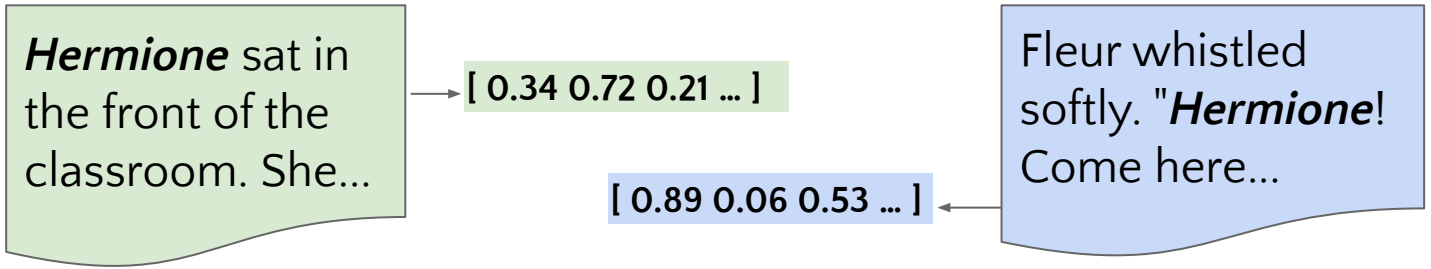
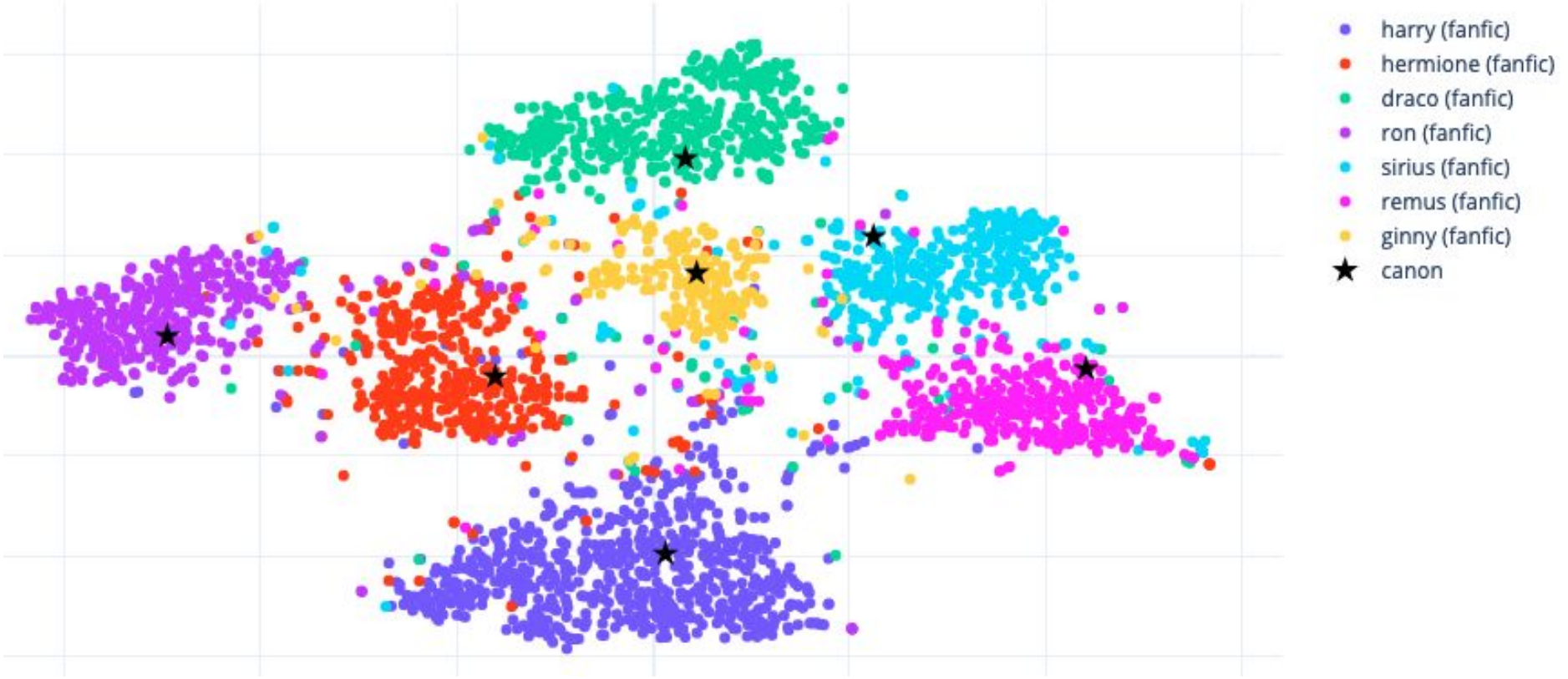
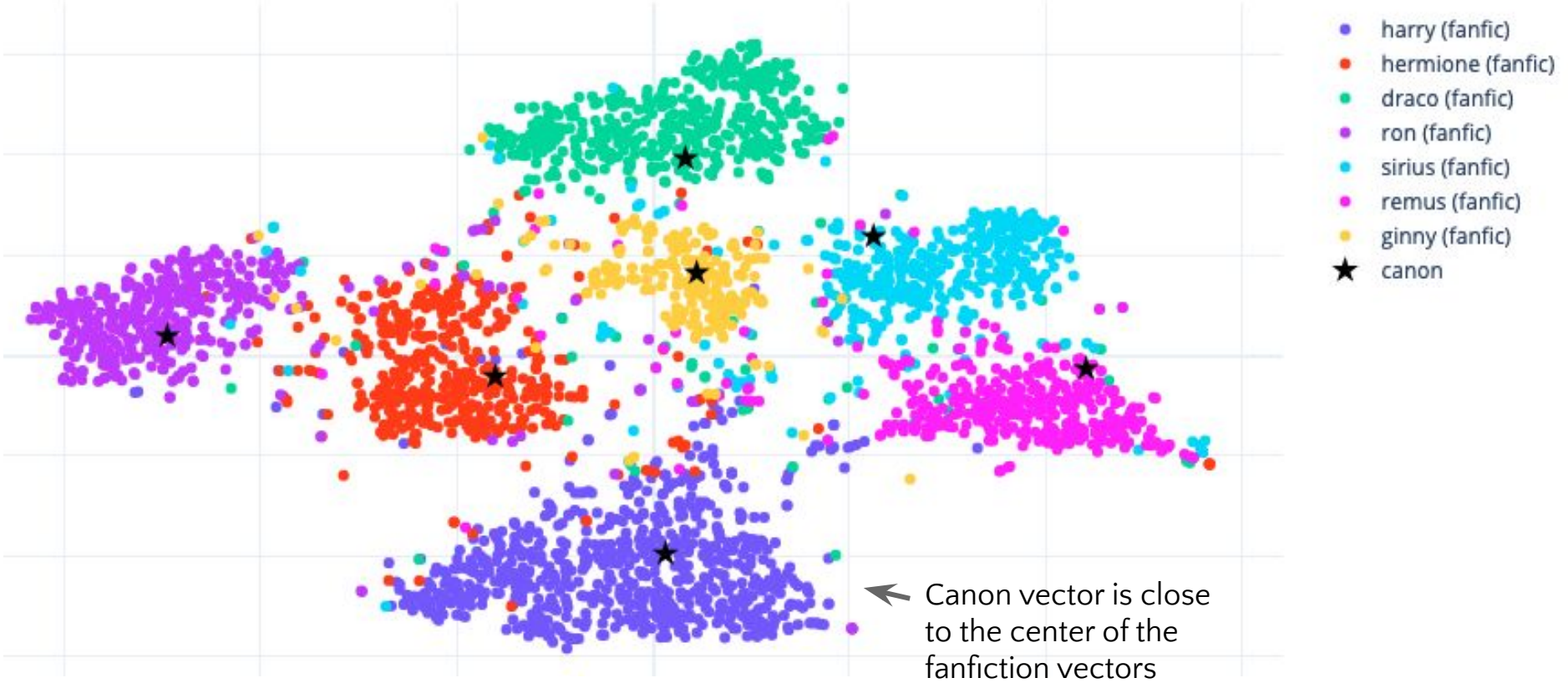


- Adapted those embeddings to the story using a language model
- Finish with a fic-specific vector representation for each character

Results


harry (fanfic)
hermione (fanfic)
draco (fanfic)
ron (fanfic)
sirius (fanfic)
remus (fanfic)
ginny (fanfic)
canon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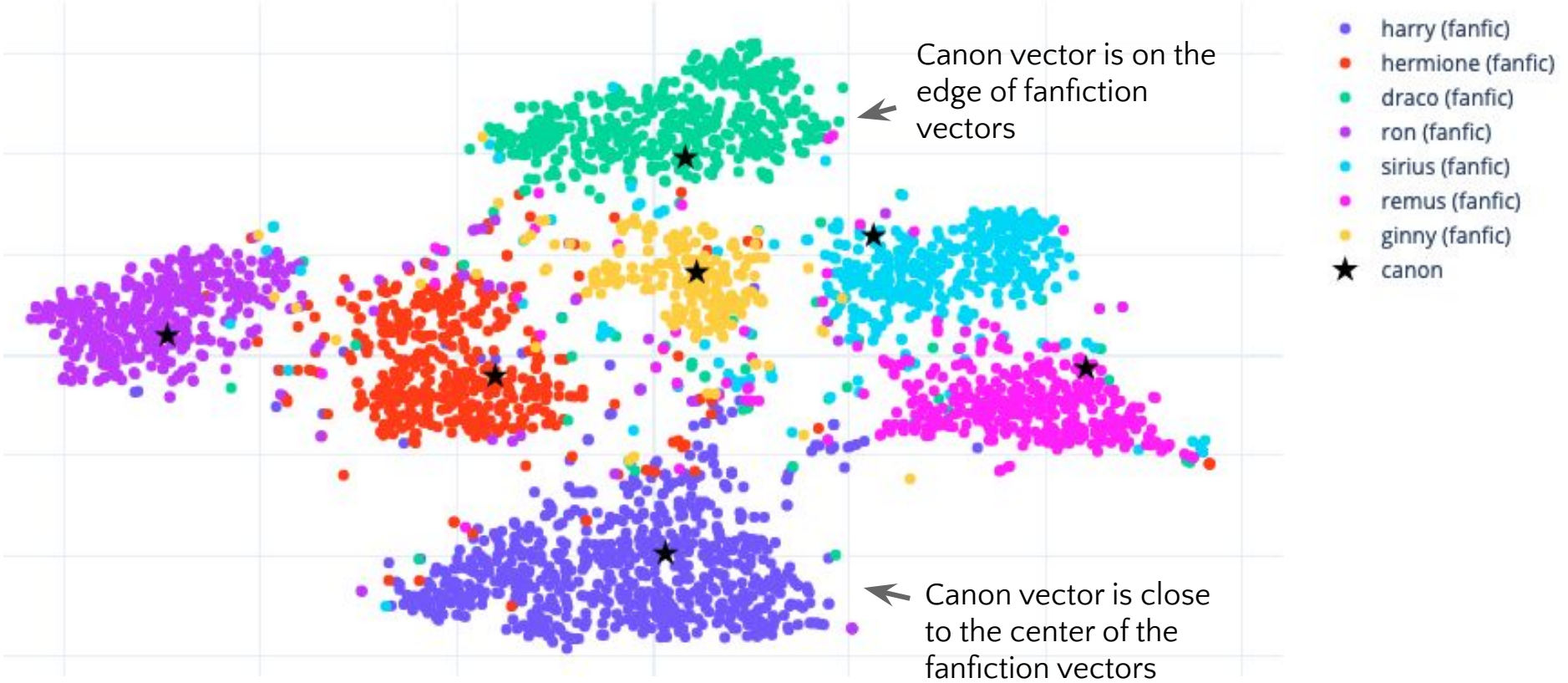
Canon vector is close to the center of the fanfiction vectors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Canon vector is on the edge of fanfiction vectors
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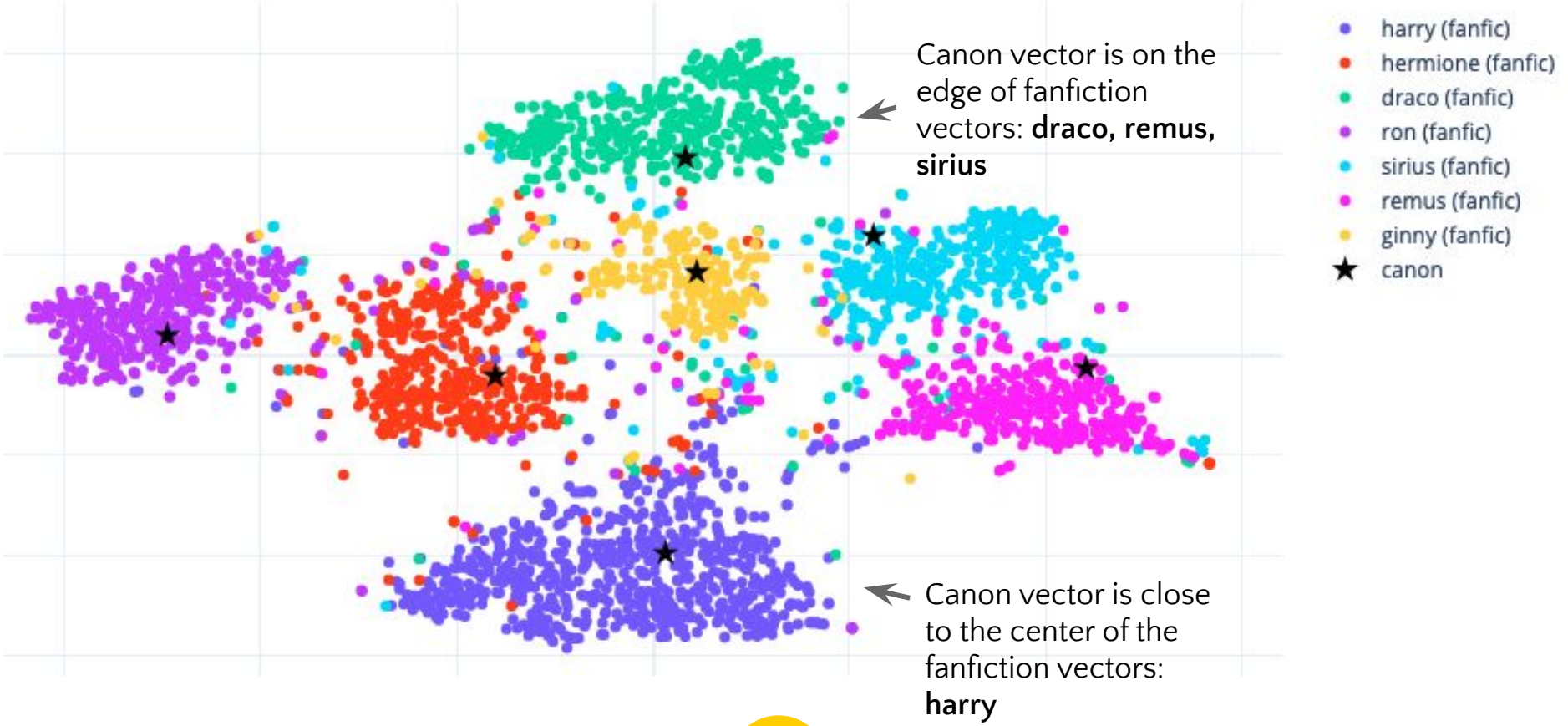
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Canon vector is on the edge of fanfiction vectors: **draco, remus, sirius**
Canon vector is close to the center of the fanfiction vectors: **harry**

Representation for **Ron**

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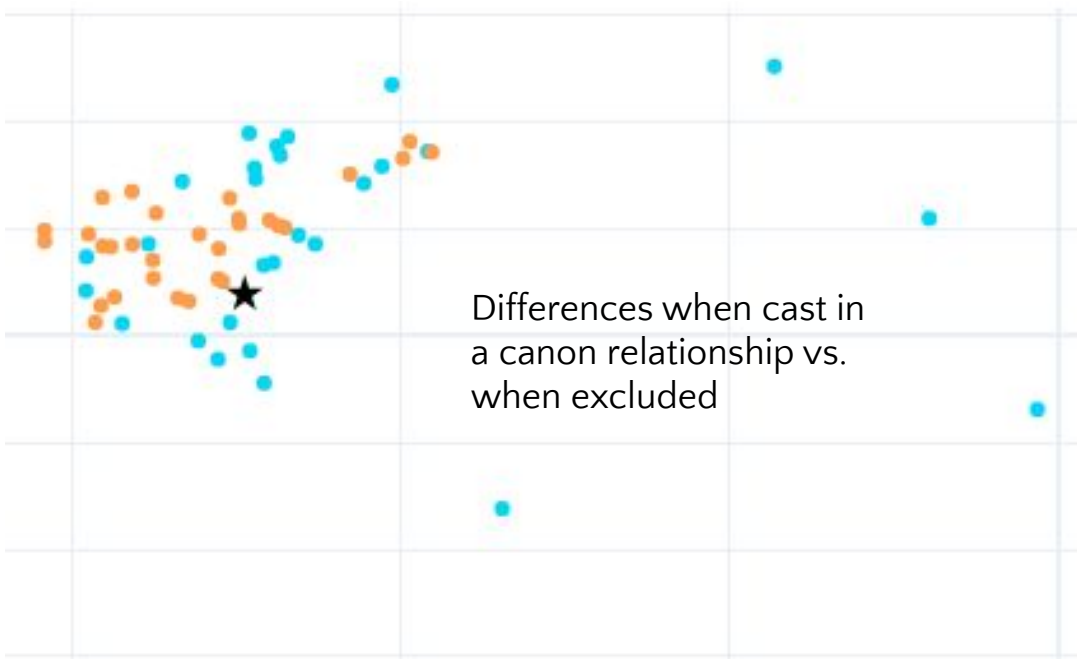

Differences when cast in a canon relationship vs. when excluded

Qualitative evaluations

- Example fic with **Hermione** representation close to canon

"...His new friends' names were Ron Weasley and **Hermione** Granger"

"...scored high in maths before high school, **Hermione** was good at everything...."

Qualitative evaluations

- Fic with **Hermione** representation far from canon

> "Draco," the brunet groaned, "Will you stop referring to Ron and **Hermione** like that?" ""Why can't we use Smith because she was **Hermione's** Mediwitch?"...

Qualitative evaluations

- Fic with **Hermione** representation far from canon

> *I hope you (whoever you are) can get this to … **Hermione** Granger so that they can do whatever it is you do with a will…*

Conclusion

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- Word embedding approaches can capture types of character framing
  - See evidence of differences in characterization, relationships
- Differences match intuitive senses of corpora
  - Though can just be surface-level discourse differences

Ongoing work

- Different dimensions of narrative relevant to characterization: quotes, narration, etc
- How are norms around gender and sexuality communicated through character representation?
- How do writers signal character divergence from canon?

Thanks!

***Questions*?**

Relationship representations

Approach	Feature Set	Canon
Majority	–	52.40
Unigrams	F ‘	55.30
	A	62.04
	A + Q	63.00
Shared	A	67.86
	A + Q	**68.52**
Aligned	A	65.06
	A + Q	64.35

F: full text, **A:** assertions, **Q**: quotes, **Canon:** indicates the prediction task of predicting whether a relationship is presented in the same romantically as canon