

My Honor!

Language Modeling and Visual Analytics
for *Avatar: The Last Airbender* Fanfiction

Andrew Zhou
8 December 2020



00

Recap: Project 4

Where were we?



Fanfiction



<https://archiveofourown.org/>

AVATAR

THE LAST AIRBENDER





Dataset

- Archive of Our Own (AO3)
- *Avatar: TLA* Fanfiction
- Popular, finished
- Non-explicit
- 1062 Works



Results

- Topic Modeling with LDA
- Identified 11 topics
- Clustered corpus into “subgenres”
- Recommendation App

Yip Yip!: A Fanfiction Recommendation App(a)

Input your favorite *Avatar: The Last Airbender* fanfics and I'll recommend similar ones from my database.

Copy paste a favorite fanfic!

feverish to the touch, then nearly untouchable. Healer Kustaa hypothesized that they now had a feverish firebender on their hands. It was, hopefully, still within the bounds of normal for their kind.

This did nothing to stop the escape attempts, which began promptly the moment Kustaa left him alone to make his report.

Add to Favorites

Clear Favorites

I recommend:

[the family we choose](#) by natlar, MuffinLance:

In retrospect, Hakoda really should have seen this whole thing coming. It h...

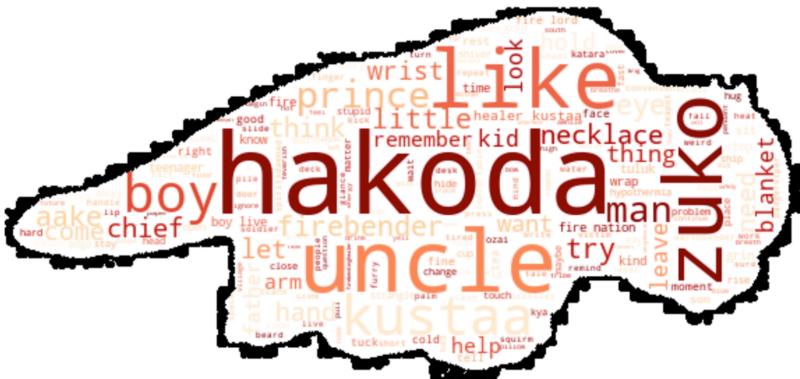
[this is no longer yours to bear alone](#) by disgruntled_lesbian:
the last time hakoda had seen the kid, zuko had been running towards danger...

[The Crown Hangs Heavy](#) by monpetitpois:
They told the story late at night around a campfire. A harrowing tale, trul...

[Aake Won't Be Fooled](#) by deutschstklasse, MuffinLance:
Aake knew his place in the world. He was Water Tribe, a warrior,

Refresh Recommendations

What words do
my favorite fics use?



01

What next?

Motivations & Objectives





Motivation

- Spur fan engagement
- Data literacy & communication
- Interactivity is key



Tasks

- Text generation
- Visual Analytics
- Character Interactions

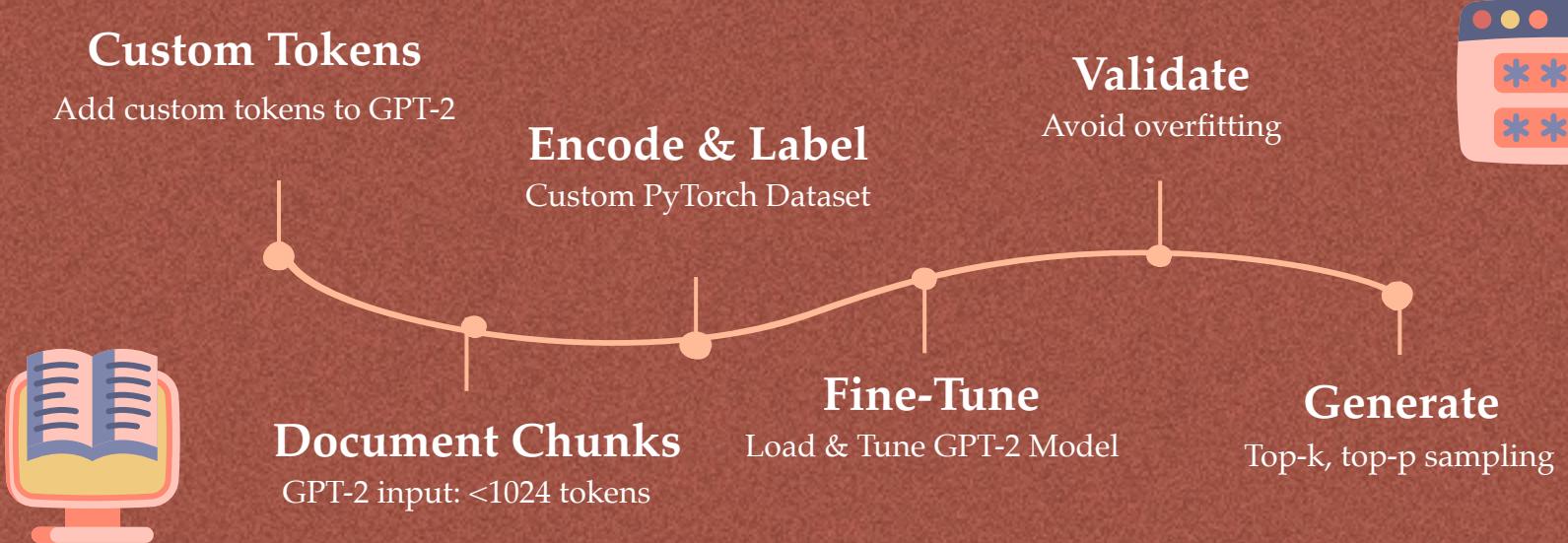
02

Text Generation

Workflow & Results



Workflow



Application!

Yip Yip!: A Fanfiction Generator

Input a starting seed and I'll generate text in the style of an *Avatar: The Last Airbender* fanfiction!

Give me some starter text!

Zuko

Your fic:

Generate a fic!

How many tokens should the fic be?

200

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“Zuko”...

Your fic:

Zuko shakes his head. "It's not like I don't want to learn what it feels like," he says, though there are small grins in his eyes and the edge of sadness still burns through him. "I could teach myself how to bend fire, but my father doesn't seem interested in that. He seems very interested only at bending for the sake of firebending purposes. "Really? "You're right! They both grow up together in that household on Ember Island; it is their homes for the summer after they have returned from the war. "I want you to get used to it," she tells him. "We'll be good friends once the war ends, but only if we can come here for tea. She gives him a small bow, and for the first time in her life he cannot bear hearing about it. "Of course," he replies, and then starts making tea. It wasn't until his uncle left the



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“Sokka”...

Your fic:

Sokka's voice is low, almost pained. "I'm not going to take him to prison. He says again and he sounds more desperate than angry or confused. "He won't want to be there, but he wants me home. Zuko is looking at him like he sees the worst in him. "Maybe he will. "It's hard for you to find a place to stay if you don't have a job," Sokka says softly. "I know that's why I told you that. He's a fugitive... He turns around and looks up, trying his best to hide his face behind his closed fist. He doesn't see any of the children in his room except for the turtleduck who has been waiting patiently outside the door to talk with them before he pulls the children aside so they can talk about it again. It's a quiet conversation; they sit together for one long moment, and Sokka can feel Zuko tense up over



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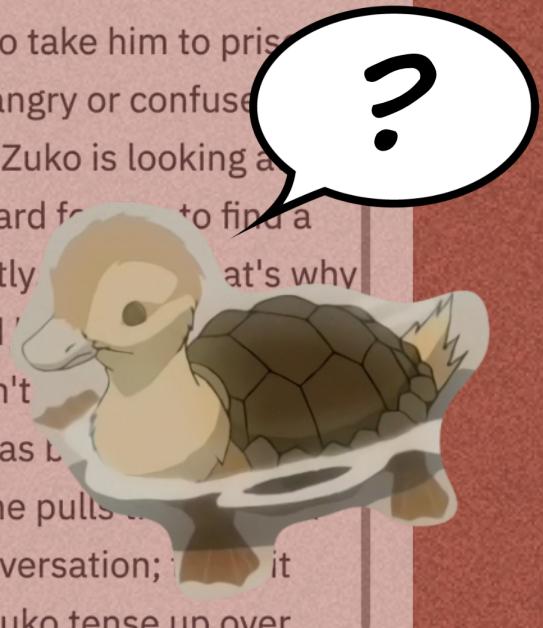
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03

Character Interactions

Frequency &
Sentiment





The Idea

- Frequency of characters and interactions
- Sentiment of interactions
- Interactivity
 - Choose pairing
 - Display interactions



The Model

- Character frequency
- “Sliding Window”
- Sentiment Analysis
 - VADER

Frequency Model

- Sliding Window
- Width of w tokens
- Present or Absent
- Frequency
 - Present/Total

 Lorem ipsum dolor sit amet, Zuko adipiscing elit, Sokka do eiusmod tempor.

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Zuko & Sokka?

$$w = 5$$

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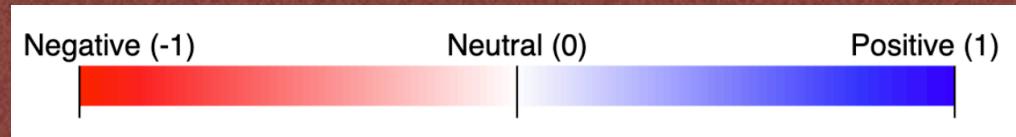
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- Zuko: 5/8
- Sokka: 4/8
- Zuko & Sokka: 2/8

Sentiment Model

- VADER Sentiment
- Average over all interactions, weighted by sentence length



Zuko and **Sokka** hate each other. (-0.57)

Zuko and **Sokka** are best buddies! (0.67)

Sentiment Model

Full sentences
for context!

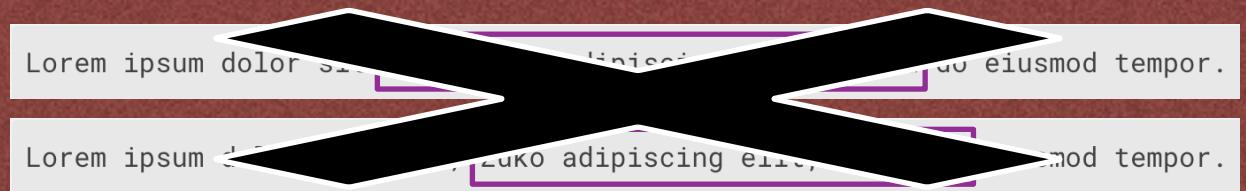
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Yip Yip!: Visual Analytics for Fanfiction



Input the text of an *Avatar: The Last Airbender* fanfiction and I'll generate visual insights about character interactions!

Input a fanfiction!

Zuko



Show me analytics!

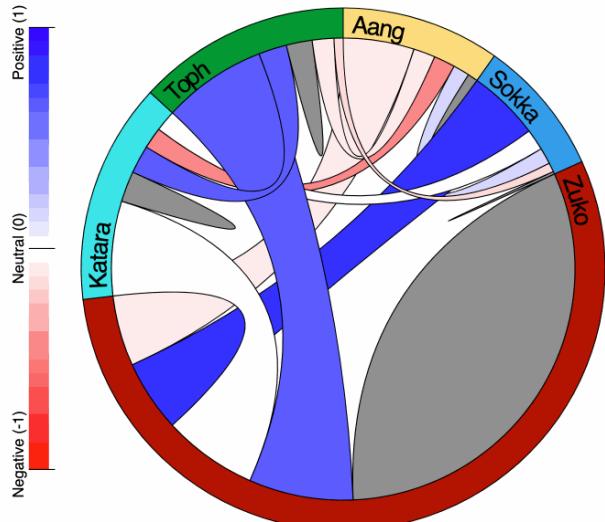
Back to Input

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Inter-Character Sentiments



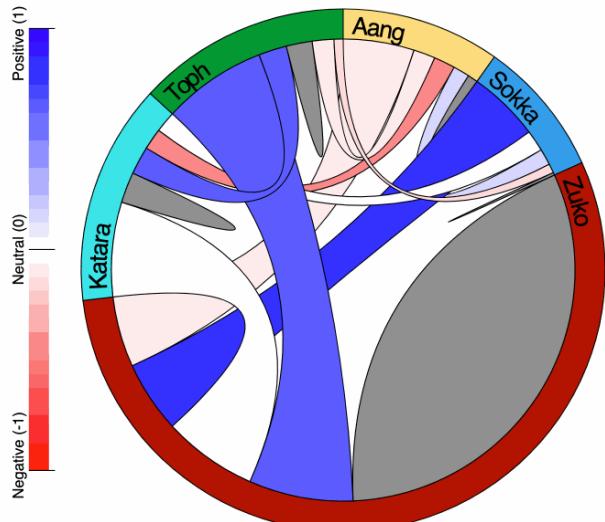
Interactions:

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Inter-Character Sentiments



Interactions:

Future Work

- Extend models to other fandoms
- Train SpaCy Named Entity Recognition model
- Entity linking with SpaCy and NeuralCoref
- Further analytics and visuals:
 - Location, geography
 - Themes, ideas
 - Progression by chapter

Thank you!

Credits & Sources

- Slidesgo
 - *Avatar: TLA* Creators and Staff
 - AO3 and fanfic authors
 - Metis Staff & Students
-
- ncoll36 @ <https://www.deviantart.com/ncoll36/art/Zuko-Avatar-723071379>
 - Patftw89 & Legend of Korra Creators @
https://www.reddit.com/r/TheLastAirbender/comments/6vxuj2/fan_art_legend_of_korra_intro_coloured_in_aangs/
 - A:TLA creators @ https://www.reddit.com/r/TheLastAirbender/comments/h0c36u/a_turtle_duck_for_all_those_people_who_are/
 - Amada44 @ <https://commons.wikimedia.org/w/index.php?curid=3588415>
 - <https://www.deviantart.com/damionmauville/art/The-Avatar-and-the-Firelord-Minimalist-Wallpaper-690137784>
 - alisa-mmxii @ <https://www.redbubble.com/people/alisa-mmxii/shop>