Episode Title Generation

Mini-project for the NUANS course

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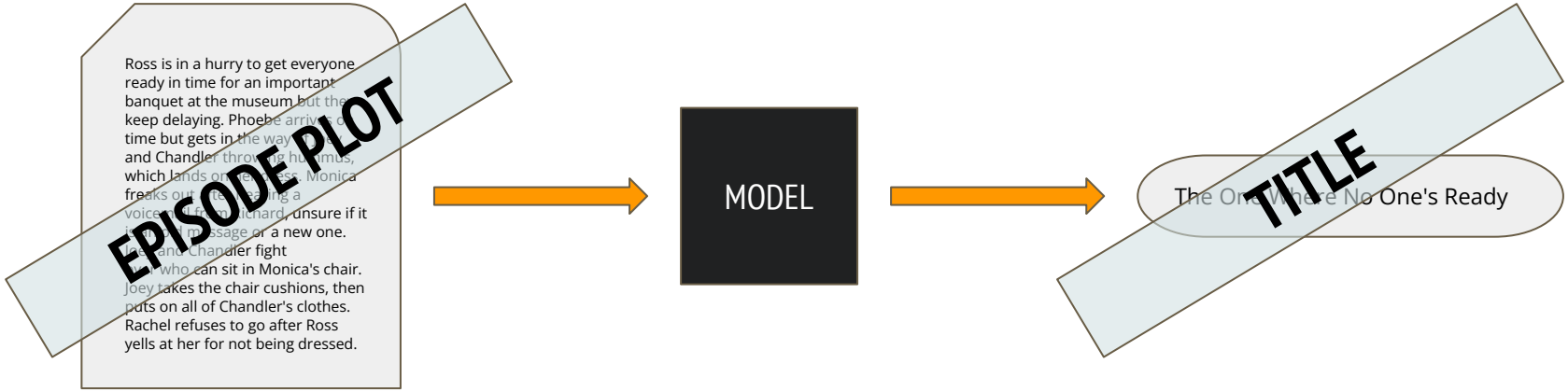
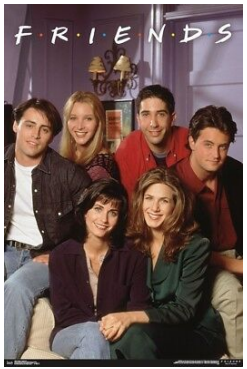
The idea in a nutshell

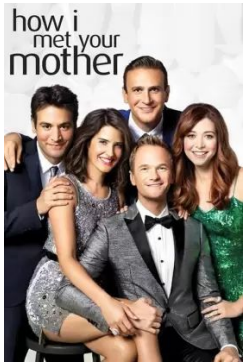


Dataset

WIKIPEDIA PLOT	WIKIPEDIA TITLE
…	…
…	…
…	…

HAND MADE





Issue

Episodes, especially of sitcom television series, often have titles that can be described as:

- in-jokey
- quirky
- obscure

and above all, they are

CATCHY

HOW CAN I OBTAIN CATCHY TEXT?

Related works

- In [1] several approaches have been used (Model using Spacy, Vanilla RNN, LSTM and LSTM with Beam Search) and at the end the author goes on to try LSTM with attention which worked more efficiently than the others.
- In [2] Mane et al. use BERT to generate short, natural, spoken language titles from input web titles.
- In [3] the author faces the problem of title generation for youtube videos or blogs using again an LSTM.

Automatic Title Generation for Text with Pre-trained Transformer Language Model (Mishra et al.) [4]

The abstract of the text is fed to the Generation module, which generates a pool of titles. From this pool, the model samples a candidate set of titles 'T' which are passed to the Selection module which will select the best title among those of the set. Finally, the chosen title is passed through the Refinement module which produces a refined title which is syntactically and semantically better.

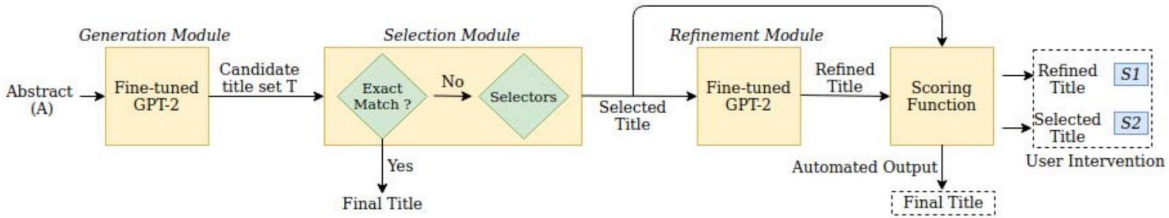


Fig. 1. Pipeline of our Title Generation approach

Building a Slogan Generator with GPT-2 [5]

A language model to generate some slogan ideas for company, product, or service. Trained on a dataset of company descriptions and their taglines, the model takes as input a short description of the product or service and outputs a list of short slogans related to the nature of the company.

Context	Slogan
Nestle Crunch Stixx, crispy wafer sticks with chocolate	Give your afternoon a lift.
White Tiger, organic energy drink	From nature, naturally.
L'Oreal Paris Shampoo	Because you're worth it.
...	...

dataset

"Starbucks, coffee chain from Seattle" (raw output, not cherry-picked):

```
Are you a big deal? Recipes choose Starbucks.
Fit for yourself. Have a cup of Starbucks. Have a cup of coffee.
Kick start, start. Loaded fresh.
Sheer coffee with touch.
Starbucks. Everywhere you are.
Starbucks knows its best when it's Starbucks.
Great coffee from our staff.
tarbucks bean clarity since 1996.
Serious coffee should never be given the same.
America's Starbucks moment.
Starbucks. Digest. Locale.
Superior coffee taste, life, and more.
Great coffee comes from country out.
Fine coffee, great coffee, lovely service.
Intaste the bean. Real coffee.
Imagine the difference in Starbucks.
Pick it up!
Time is not enough.
Experience. Enjoy. Pleasure.
Inspiring science.
```

result example

Implementation and Evaluation metrics

In light of these two previous works I will use:

GPT-2

About the evaluation:

References

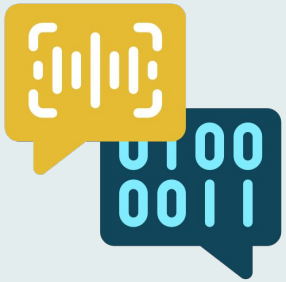
[1] Title Generation using NLP

[2] Product Title Generation for Conversational Systems using BERT

[3] Title Generator with Machine Learning

[4] Automatic Title Generation for Text with Pre-trained Transformer Language Model

[5] Building a Slogan Generator with GPT-2



Thank you