

Quote Generator

Using Language Models



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Language Models are widely used



Gmail smart compose
Next word predictor



Language Translation



Speech Recognition
Handwriting Recognition



Auto Reply Bots

Data Collection & Pre-Processing



- ▷ Downloaded pdfs for movie scripts
- ▷ Cleaned text files
- ▷ Stored in MongoDB

<character> : <dialogue>

<character>
\n
<dialogue>



- ▷ Split corpus per character
- ▷ Tokenize words



Models



Contestants! Gather around!

- *Dumbledore*

N-gram Model

- ▷ Conditional Probability
- ▷ Word-level ngrams
- ▷ Bigram < Trigram vs 4gram

*Really ? Wasn't you had to roll under the bed
last night to avoid getting cut to ribbons ! A
person could die being your friend , Harry !
- Ron Weasley
(4gram model)*

*Have to admit , thought I did think maybe I saw
something - when it blew away ?
- Ron Weasley
(trigram model)*

LSTM Model

Recurrent Neural Network



Don't you think we've made a plan where so many things could go wrong?!

- Ron Weasley

Word Level

- ▷ 3 layers
- ▷ 1 Dropout
- ▷ Activation : ReLU, Softmax
- ▷ Optimizer : Adam
- ▷ Loss : Categorical Cross-entropy

*Evening Harry I have a old luck of the maze
continued you will also not been afraid
Harry I think it's Voldemort
- Dumbledore*

Char Level

- ▷ 1 layer
- ▷ 1 Dropout
- ▷ Activation : Softmax
- ▷ Optimizer : RMSProp
- ▷ Loss : Categorical Cross-entropy

*Ron! you'll led the evolve those D wow gar' What
honored buitee. what's that means, sir? I don't enlw
what happened? Thoss' limay they learn yagt mire
me phec.
- Harry*

A dramatic night scene of Hogwarts Castle from the Harry Potter series. The castle's iconic spires and towers are silhouetted against a dark, starry sky. A bright, glowing light source, possibly the moon or a magical light, illuminates the left side of the castle, casting a soft glow on the clouds. The castle's windows are lit up, and the overall atmosphere is magical and mysterious.

Creating a Quote Generator App

(Using N-grams)

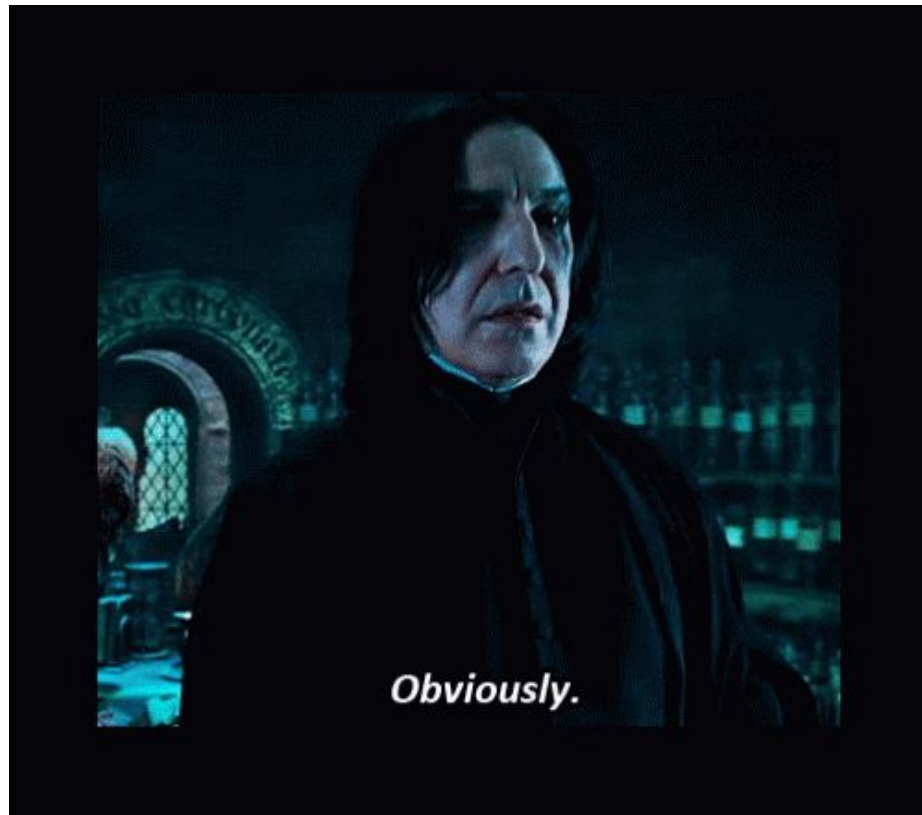
Welcome to Zonko's Joke Shop!

Dumbledore ▾ Generate!

Dumbledore : "It is your job to make a wish , now lie on the right hand side is out of bounds to everyone who does not wish to withdraw from the ashes ."

Future Work

- ▷ More data -
 - Data augmentation
 - Expand beyond HP movie scripts - use larger corpus
- ▷ More tuning -
 - Hyperparameters
 - Layers
 - Smoothing for ngrams



Thanks!

Any questions?