

Question Generator

Library used:

<https://spacy.io/>

<https://github.com/summanlp/textrank>

Text Class

- I choose short stories for kids as my text class
- Specifically animals stories
- All stories that I worked on are from [this](#) website
- These stories are short
- Contains sentences mostly in past tense

Question types

- I choose four types of questions
- Noun phrases
- Verb phrases
- Who said a Quote
- Question about a Quote

Noun Phrases

- In these type of questions I used spacy noun_chunk feature
- Using spacy I found the noun_chunk of a sentence whose root is subject of the sentence
- Then I replace that noun_chunk with 'Who'
- Generating a syntactically correct question

Noun Phrases - Example

- A quick fox jumps over the lazy dog, noun_chunks

Text	Root text	Root dep	Root pos	Root head	Head pos
The quick fox	fox	nsubj	NOUN	jumps	VERB
the lazy dog	dog	pobj	NOUN	over	ADP

Sentence:

The quick fox jumps over the lazy dog

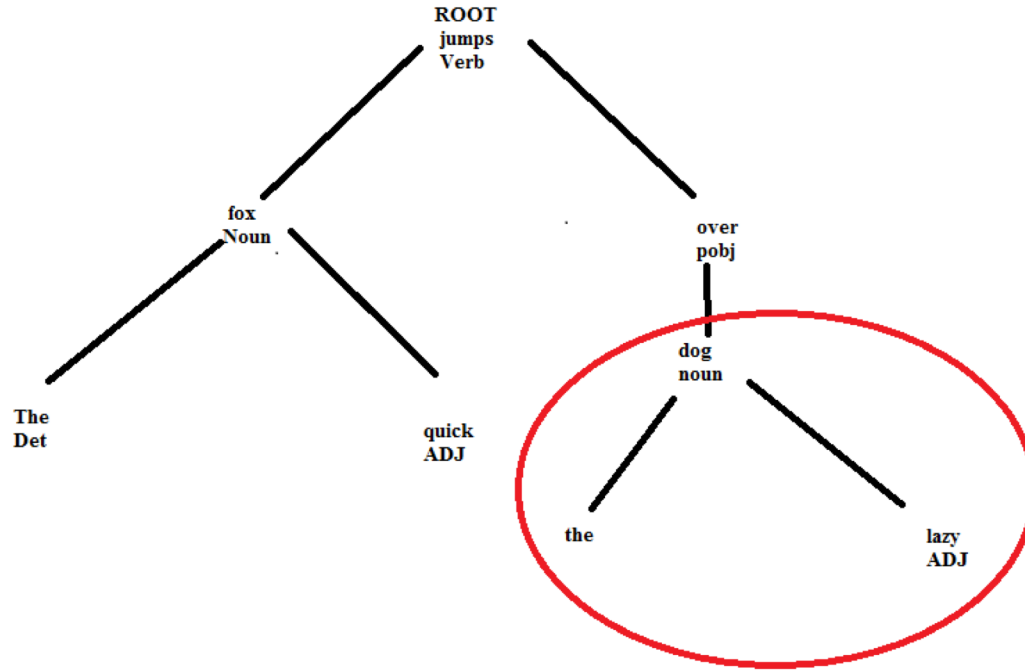
Question:

Who jumps over the lazy dog

Verb Phrases

- In this type of questions I again used dependency tree
- I iterate over each token, reaching to the ROOT of the tree
If ROOT is VERB
- Now from this ROOT I append left tree in my question text
And replacing the right tree with a 'what?'
- Also if the next child of ROOT is prep or prt I append them
in my question text too

Verb Phrases - Example



Verb Phrases - Example

- For verb phrases questions
- I replaced the right tree in diagram highlighted with red circle
- With 'What?'
- Generating a syntactically correct question
- Sentence:
- The quick fox jumps over **the lazy dog**
- Question:
- The quick fox jumps over **what?**

Who said a Quote

- In this type of questions I have sentences with quotes
- E.g. **"Will you be my friend?" asked the elephant.**
- I split quoted and unquoted text from the sentence
- And replaced noun _chunk of unquoted text with who?
- Generating: **"Will you be my friend?" asked who?**

Question about a Quote

- In this type of questions I have sentences with quotes in which the quotes are at end
- E.g. **The elephant walked up to the tiger and said, "Please, Mr. Tiger, do not eat up these poor animals."**
- I again split the sentence on Quotes
- Replacing the last quotes with 'what?', Generating:
- **The elephant walked up to the tiger and said what?**