Attribute Phrase Detection

Review 1 : Iphone x has very good camera. I bought this one in a local store near to my home. It has very good features.

Review 2 : Samsung s9 is one of the best phone. It has a good sound quality. The build is also very good.

Review 3 : Hello guys, I purchased this awesome shirt on Amazon with such a good price. I had to sell my kidney in order to buy this.
But I feel it is worth selling my kindey after wearing it.

Review 4 : This shirt has very good material. Texture and style is what makes this brand awesome.

Feature engineering in text

NLTK library

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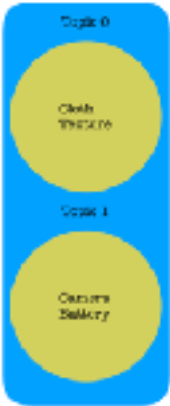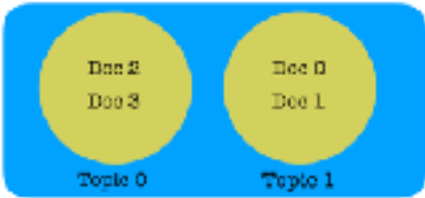
Review 1 : Iphone x, camera, one, store, home,

Review 2 : Samsung s9, phone, sound quality,

Review 3 : Hello guys, shirt, Amazon, price, kidney,

Review 4 : shirt, material, Texture, style,

	phon	came	batte	and	of	the	cloth	textu	styl
do	0.000	0.408	0.408	0.000	0.000	0.816	0.000	0.000	0.000
do	0.372	0.372	0.372	0.000	0.472	0.372	0.000	0.000	0.472
do	0.000	0.000	0.000	0.707	0.000	0.000	0.000	0.707	0.000
do	0.465	0.000	0.000	0.465	0.000	0.000	0.590	0.465	0.000

Today's topics

1 Part of speech

There are thousands of words present in English but they don't all have the same job. For example:

- Some word express action

- Some words express things

- Other words join one word to another word

These are the "building blocks" of the language. Think of them like the parts of a house. When we want to build a house, we use concrete to make the foundations or base. We use bricks to make the walls. We use window frames to make the windows, and door frames to make the doorways. And we use cement to join them all together. Each part of the house has its own job.

In a similar way we have 9 types of words and each word has its own job. So each word present in a sentence can be categorised into one of the 9 types. Those are

VERB	ADVERB	DETERMINER
NOUN	PRONOUN	CONJUNCTION
ADJECTIVE	PREPOSITION	INTERJECTION

A meaningful sentence can be formed using these 9 different category words.

pron.	verb	adj.	noun	conjunction	pron.	verb	pron.
She	likes	big	snakes	but	I	hate	them.

- verb (*deliver* - expresses action)

- noun (*computer* - expresses a thing)

- adjective (*yellow* - tells us more about a noun)

- adverb (*quickly* - tells us more about a verb)

- pronoun (*it* - replaces a noun)

- preposition (*on* - links a noun to another word)

- determiner (*the* - limits a noun)

- conjunction (*and* - joins words)

- interjection (*ouch!* - expresses feeling)

We have 9 types of words. NLTK is a library that helps us to find the type of these words

Sentence	She likes big snakes but I hate them
Word representation	['She', 'likes', 'big', 'snakes', 'but', 'I', 'hate', 'them']
NLTK Library	
Output	[('She', 'PRP'), ('likes', 'VBZ'), ('big', 'JJ'), ('snakes', 'NNS'), ('but', 'CC'), ('I', 'PRP'), ('hate', 'VBP'), ('them', 'PRP')]

3 Key phrases

keyword means one single word. key phrase means a set of separate words that build a phrase. Basically, key phrases are short, simple descriptors of some attributes or objects.

There is a difference between part of speech and key phrase. Part of speech has pre defined set of categories. Each word in a sentence will fall into one of these categories. While Key phrases are set of words such that these words represents some important aspects of the sentence.
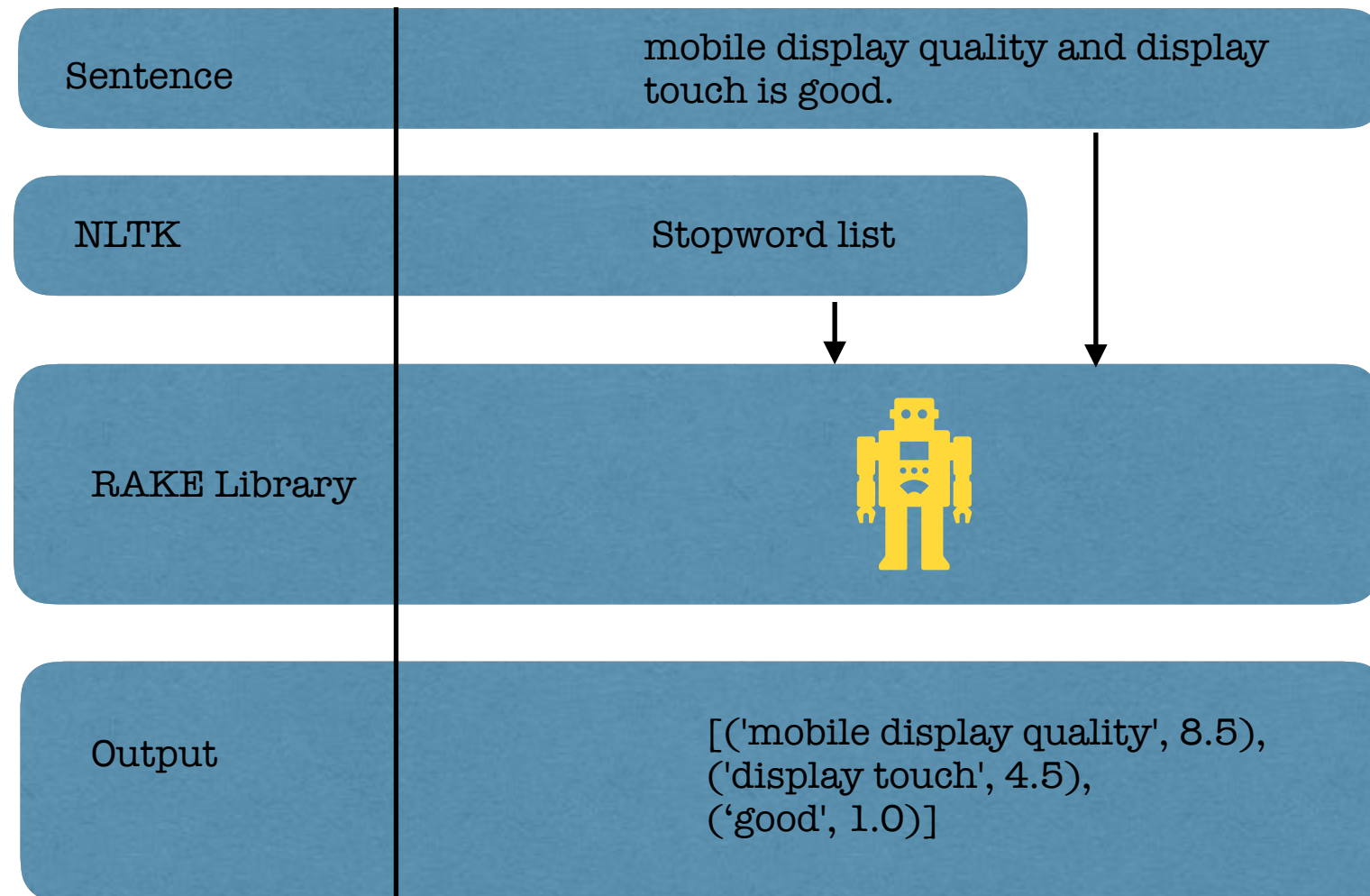
For example, Consider a sentence:

Camera quality of this phone is good and the amount of recharge in a small time is also significant.

For this sentence key phrases can be listed as:

- camera quality
- The amount of recharge
- The amount of recharge in a small time

4 Rake library

RAKE is a library that helps us to find the important key phrases present in the sentence

Sentence	mobile display quality and display touch is good.
NLTK	Stopword list
RAKE Library	
Output	[('mobile display quality', 8.5), ('display touch', 4.5), ('good', 1.0)]

Review 1 : Iphone x has very good display quality and the display touch is also very smooth.

Review 2 : Samsung s9 is one of the best phone. It has a good sound quality. The build is also very good.

Review 3 : This shirt texture has a neat touch. The fine finish of the sleeves gives it amazing look.

Review 4 : I bought this pant online. The cloth material is good and bright colour looks perfect on my weekend.

Feature engineering in text

RAKE library

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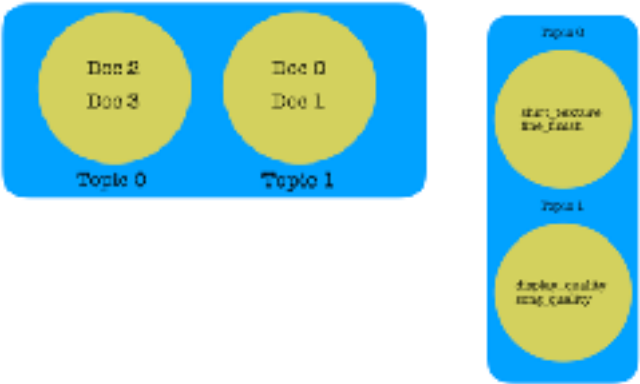Review 1 : display_quality, display_touch

Review 2 : good_sound_quality

Review 3 : shirt_texture, fine_finish

Review 4 : cloth_material, bright_colour

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