

Assignment 2 Report

Jeremy Piperni

260990011

Levenshtein distance was calculated using the following algorithm:

https://en.wikibooks.org/wiki/Algorithm_Implementation/Strings/Levenshtein_distance#Python

Part 1: Generating Text Using a Markov Model

Sentence generation examples:

Example 1:

Mrs . Weston was often looking at her time to subdue it , and an early hour , and not very well ; and from his wife .

Sources: (Word:Source)

['Mrs: Bigram', ' ': Trigram', 'Weston: Trigram', 'was: Trigram', 'often: Trigram', 'looking: Trigram', 'at: Trigram', 'her: Trigram', 'time: Trigram', 'to: Trigram', 'subdue: Trigram', 'it: Trigram', ' ', 'and: Trigram', 'an: Trigram', 'early: Trigram', 'hour: Trigram', ' ', 'and: Trigram', 'not: Trigram', 'very: Trigram', 'well: Trigram', ' ', 'and: Trigram', 'from: Trigram', 'his: Trigram', 'wife: Trigram', ' ', '</s>: Trigram']

Example 2:

Mrs Croft ' s mind .

Sources:

['Mrs: Bigram', 'Croft: Trigram', "'": Trigram", 's: Trigram', 'mind: Trigram', ' ': Trigram', '</s>: Trigram']

Example 3:

She had seen her ?

Sources:

['She: Bigram', 'had: Trigram', 'seen: Trigram', 'her: Trigram', '?': Trigram', '</s>: Trigram']

Example 4:

It was a very good - humoured , cheerful , exulting , of rational dependence :-- " We have had a great deal of good fortune .

Sources:

['It: Bigram', 'was: Trigram', 'a: Trigram', 'very: Trigram', 'good: Trigram', '-: Trigram', 'humoured: Trigram', ',: Trigram', 'cheerful: Trigram', ',: Trigram', 'exulting: Trigram', ',: Trigram', 'of: Trigram', 'rational: Trigram', 'dependence: Trigram', '!--: Trigram', '": Trigram', 'We: Trigram', 'have: Trigram', 'had: Trigram', 'a: Trigram', 'great: Trigram', 'deal: Trigram', 'of: Trigram', 'good: Trigram', 'fortune: Trigram', '.: Trigram', '</s>: Trigram']

Example 5:

I never happened to be better than to my poor son gone for ever .

Sources:

['I: Bigram', 'never: Trigram', 'happened: Trigram', 'to: Trigram', 'be: Trigram', 'better: Trigram', 'than: Trigram', 'to: Trigram', 'my: Trigram', 'poor: Trigram', 'son: Trigram', 'gone: Trigram', 'for: Trigram', 'ever: Trigram', '.: Trigram', '</s>: Trigram']

Part 2: Sentence Correction Using a Hidden Markov Model

Sentences to be corrected	Corrected sentences
I think hat twelve thousand pounds	I think that there should you
she haf heard them	she had heard them
She was ulreedy quit live	She was already quite like
John Knightly wasn't hard at work	John Knightley was hard at work
he said nit word by	he said it would be