import matplotlib.pyplot as plt

import seaborn as sns

import matplotlib as mpl

import matplotlib.pylab as pylab

import numpy as np

%matplotlib inline

import re

sentences = """We are about to study the idea of a computational process.

Computational processes are abstract beings that inhabit computers.

As they evolve, processes manipulate other abstract things called data.

The evolution of a process is directed by a pattern of rules

called a program. People create programs to direct processes. In effect,

we conjure the spirits of the computer with our spells."""

# remove special characters

sentences = re.sub('[^A-Za-z0-9]+', ' ', sentences)

# remove 1 letter words

sentences = re.sub(r'(?:^| )\w(?:$| )', ' ', sentences).strip()

# lower all characters

sentences = sentences.lower()

words = sentences.split()

vocab = set(words)

vocab\_size = len(vocab)

embed\_dim = 10

context\_size = 2

word\_to\_ix = {word: i for i, word in enumerate(vocab)}

ix\_to\_word = {i: word for i, word in enumerate(vocab)}

# data - [(context), target]

data = []

for i in range(2, len(words) - 2):

context = [words[i - 2], words[i - 1], words[i + 1], words[i + 2]]

target = words[i]

data.append((context, target))

print(data[:5])

def accuracy():

wrong = 0

for context, target in data:

if(predict(context) != target):

wrong += 1

return (1 - (wrong / len(data)))

accuracy()