

```
In [141... %matplotlib inline
import os
import sys
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import matplotlib.pyplot as plt
import matplotlib
from matplotlib.pyplot import figure
```

```
In [142... def loadTweet():
    twt = pd.read_csv("merged_csv_dataset_forTweet.csv")
    return twt
tweet = loadTweet()
```

```
In [143... def loadSlang():
    slang = pd.read_csv("slang_database.csv")
    return slang
slang = loadSlang()
```

```
In [144... def implementation(tweet):
    match = 0
    tweet.lower()
    for index, row in slang.iterrows():
        try:
            match = tweet.index(row['Abbreviations'])
        except (ValueError, TypeError):
            match = -1
        if match > -1:
            punct = ["", " ", ".", ",", "!", "?"]
            #print(tweet[tweet.index(row['Abbreviations'])])
            if match == 0 or tweet[(match-1):match] in punct:
                tweet = tweet.replace(row['Abbreviations'], row['Text'])
    return tweet
```

Test Cases

```
In [145... # example of 1 sentence
oneExample = "lol dw, I will dm you."
implementation(oneExample)
```

```
Out[145]: "laughing out loud don't worry, I will direct message you."
```

```
In [146... smallExample = pd.read_csv("small_dataset_example.csv")
print(smallExample)
```

```
Love it!
0 So awesome. Read my morning meditation anytime...
1 Just replaced one add with another, albeit AA ...
2 Don't bother upgrading. There is zero differen...
3 Every time I go to share the reading it pops u...
4 Good, simple app
5 This is a great app has too many commercials b...
6 Paid for the "Pro" and it still doesn't displa...
7 App works as intended. Sobriety date set and s...
8 Thank you I was able to get the pro. Daily ref...
9 I have Loved the Daily Reflection for over 20y...
10 All works great for me on my tablet. Had to fi...
11 Got the Pro edition hoping it would be an impr...
12 Fantastic positive daily excerpts from the boo...
13 I love this app, but my sobriety date and time...
14 Excellent for the recovering addict to b remin...
15 extremely handy to have all my morning reading...
16 awesome?
17 perfect
18 The daily notification displays the WRONG dail...
19 calculate number of days of sobriety I cannot ...
20 When I select past dates it displays the wrong...
21 I use this app everyday. I love ebooks rather ...
22 Won't show my sober time; even after checking ...
```

In [147...

```
#example of small dataset
print(implementation(smallExample.to_string()))
```

Love it!

0

Gentle warning, like "Hmm? What did you say?"o awesome. Read my morning meditation anytime I want. Great app im glad i purchased upgraded so no commercials or advertisements.

1

Just replaced one add with another, albeit Alcoholics Anonymous related. Couldn't get sobriety date to same hereow. Dislike notifications not being thismissable. Refunded until fixed.

2

Don't bother upgrading. There is zero difference between free and paid. I still get ads every time I open to the meditation passage. It says you can do things like track sobriety date-doesn't. There is no "contact us" info. But they seemed to gladly take my money.

3

Every time I go to same hereare the reading it pops up with no reading. Can you please make it so we can copy and paste it.

4

Good, simple app

5

This is a great app has too many commercials but for someone like me it just teaches me strength. Absolutely great app recommend to everyone in Alcoholics Anonymous

6

Paid for the "Pro" and it still doesn't thisplay sobriety time. Doeant even ask for my sobriety date anywhere. But the daily reflections part of the app is fine.

7

App works as intended. Gentle warning, like "Hmm? What did you say?"obriety date set and sticks, transparency no issues, reminders no issues. Pro version in tow to what's upport app development. Thanks for this!

8

Thank you I was able to get the pro. Daily reflection is my most favorite mediation book.

9

I have Loved the Daily Reflection for over Meaning "location" (trucking lingo)yrs, th is app is ok, but it DOEGentle warning, like "Hmm? What did you say?"N'T allow me to enter my date.

10

All works great for me on my tablet. Had to figure out how to input my sobriety date, otherwise flawless so far!

11

Got the Pro edition hoping it would be an improvement of the free app. It wasn't. If you start reading the intro paragraph in the notification and click on it to continue reading, you're brotherught to something completely different. The sobriety date doesn't same hereow, nor was there an option that I could find to set my sobriety date. Notifications were inconsistent- I would get 4 one day and nothing for 4 days. REALLY love the simplicity of this app, IF it worked. I refunded.

12

Fantastic positive daily excerpts from the books that keep us from our addiction one day at a time.

13

I love this app, but my sobriety date and time are see yout off, so i cant see them.

😞 i have paid for the pro version, i hoped it would solve this probablylem, but it hasnt. I have tried adjustin the font sizes to no avail.

14

Excellent for the recovering addict to b reminded. Purchased to what's upport development.

15

extremely handy to have all my morning readings on my phone

16

awesome?

17

perfect

18

The daily notification thisplays the WRONG daily reflection. The sobriety date text i s see yout off so you only see the top half of each character. This seems like it sam e hereould be an easy fix. PLEAGentle warning, like "Hmm? What did you say?"E FIX IT AND PUGentle warning, like "Hmm? What did you say?"H OT AN UPDATE.

19

calsee youlate number of days of sobriety I cannot ge us to do this

Meaning "location" (trucking lingo)

When I select past dates it thisplays the wrong date. example: I select February 10th on the calendar to view past readings and it thisplays different dates throughout Feb ruary each time. Annoying. It would be cool if you'd deliver a less buggy version for people that pay for the app. thanks.

21 I use this app everyday. I love ebooks rather than paper ones. I paid the money t o get rid of that annoying ad. i was happy for a minute. From my perspective, this is a very simple app. And since i have now paid money for it, it would be great to see c ertain things. It would be awesome if the same hereare feature worked everytime. Anot her feature that would greatly improve this app would be thw ability to get definitio ns for words when I highlight them. Which brings me to my last suggestion, highlighti n

22

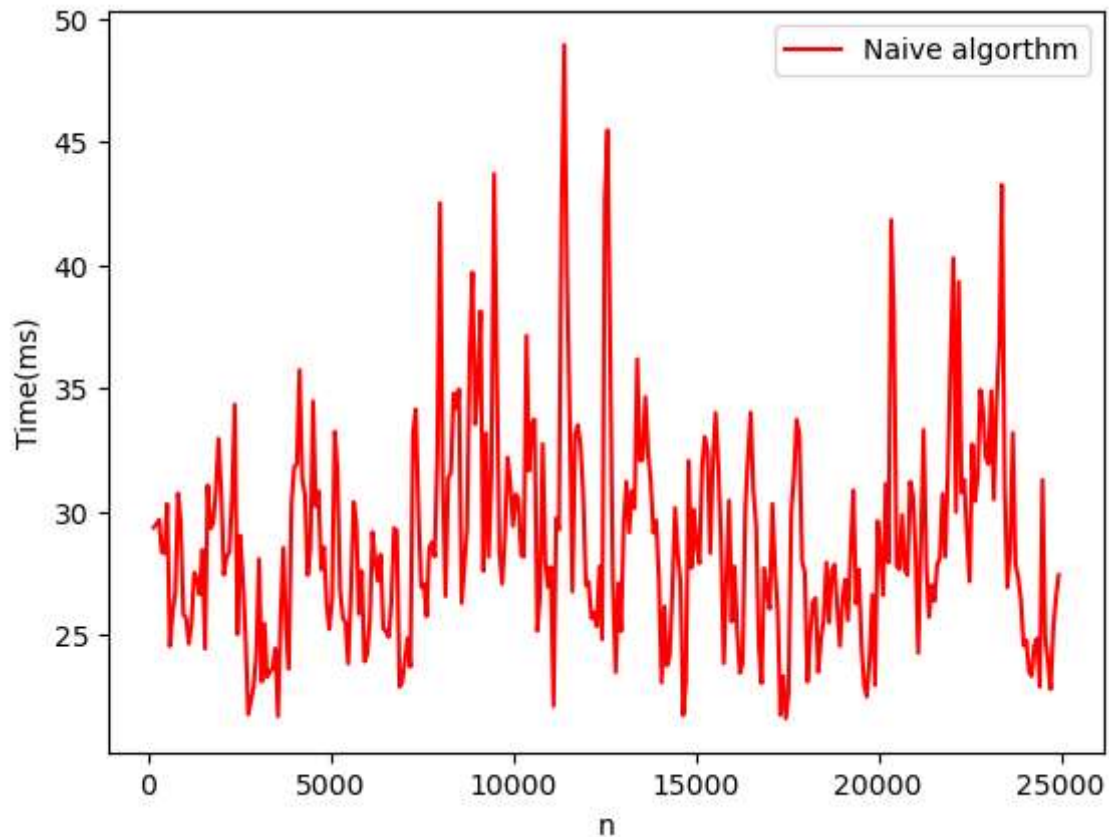
Won't same hereow my sober time; even as freakter checking and unchecking it in the \nsettings. Also uninstalled and reinstalled to see if that might help. Gentle warnin g, like "Hmm? What did you say?"till \nno thisplay of sobriety time....

Time complexity Plot

```
In [148... from tryItABunch import tryItABunch
nValuesNaive, tValuesNaive = tryItABunch(implementation, startN = 148, endN = 25000, s
```

```
In [149... plt.plot(nValuesNaive, tValuesNaive,color="red", label="Naive algorithn")
plt.xlabel("n")
plt.ylabel("Time(ms)")
plt.legend()
```

```
Out[149]: <matplotlib.legend.Legend at 0x200c0a173a0>
```



```
In [150... from tryItABunchOn import tryItABunchOn
nValuesNaive2, tValuesNaive2 = tryItABunchOn(numTrials=5)
```

```
-----
ImportError                                Traceback (most recent call last)
Cell In[150], line 1
----> 1 from tryItABunchOn import tryItABunchOn
      2 nValuesNaive2, tValuesNaive2 = tryItABunchOn(numTrials=5)

ImportError: cannot import name 'tryItABunchOn' from 'tryItABunchOn' (C:\Users\linhn\OneDrive\Documents\Keyword Replacement in a corpus\tryItABunchOn.py)
```

```
In [ ]: m, b = np.polyfit(nValuesNaive, tValuesNaive, 1)
nValuesNaiveNP = np.array(nValuesNaive)
figure(figsize=(15,10))
plt.plot(nValuesNaive2, tValuesNaive2,color="blue", label="O(m+n)")
plt.plot(nValuesNaive, m*nValuesNaiveNP+ b,color="red", label="Naive algorithm")
plt.xlabel("n")
plt.ylabel("Time(ms)")
plt.legend()
plt.title("Naive algorithm versus O(m+n)")
```

```
In [ ]:
```