Combining the power of Python with R

Contents

R + Py

This is a simple (could be called, `naive` as well) attempt to show how we can combine the power of `Python` with `R` and create a new superpower.

Like this one, If you have watched **The Incredibles** before!

About this Dataset

This dataset contains a bunch of tweet that came with this tag **#JustDoIt** after **Nike** released the ad campaign with Colin Kaepernick that turned controversial.

Figure 1: Nike Ad Campaign

Dataset source: https://www.kaggle.com/eliasdabbas/5000-justdoit-tweets-dataset

Superstar - Reticulate

The superstar who's making this possible is the R package `reticulate` by RStudio.

Let us start with the code!!

The R Code

```
#loading required R libraries


library(tidyverse)
library(ggthemes)
library(knitr)
tweets <- read_csv("justdoit_tweets_2018_09_07_2.csv")
text <- tweets$tweet_full_text
set.seed(123)
text_10 <- text[sample(1:nrow(tweets),100)]
```

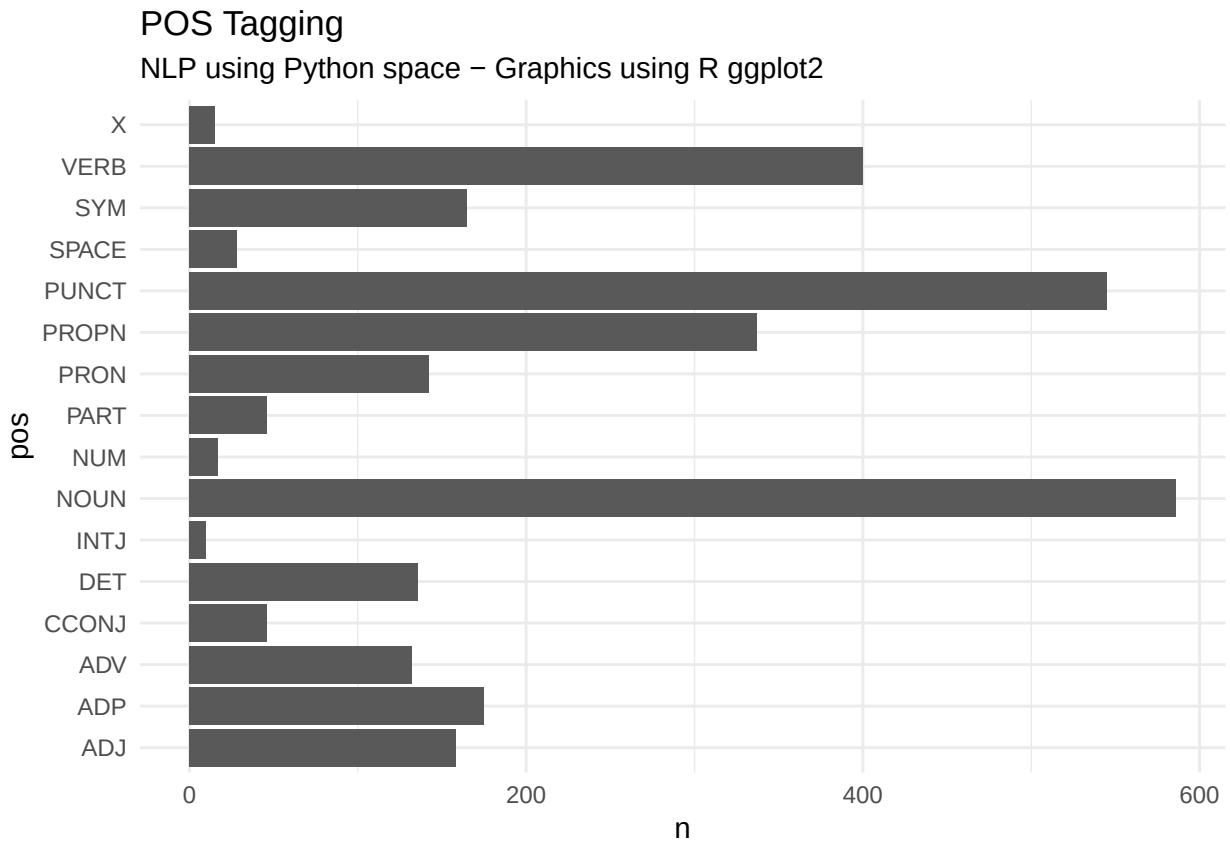
The Python Code

```
import spacy
import pandas as pd
nlp = spacy.load('en_core_web_sm')
doc = nlp(str(r.text_10))
pos_df = pd.DataFrame(columns = ["text","pos","lemma"])
for token in doc:
    df1 = pd.DataFrame({"text" : token.text, "pos" : token.pos_, "lemma" : token.lemma_}, index = [0])
    #print(token.text, token.pos_)
    #print(df1)
    pos_df = pd.concat([pos_df,df1])
#print(pos_df)
```

Now, Again The R Code

```
#data.frame(token = as.vector(py$tokens)) %>% count(token) %>% arrange(desc(n))

py$pos_df %>%
  count(pos) %>%
  ggplot() + geom_bar(aes(pos,n), stat = "identity") +
  coord_flip() +
  theme_minimal() +
  labs(title = "POS Tagging",
       subtitle = "NLP using Python space - Graphics using R ggplot2")
```

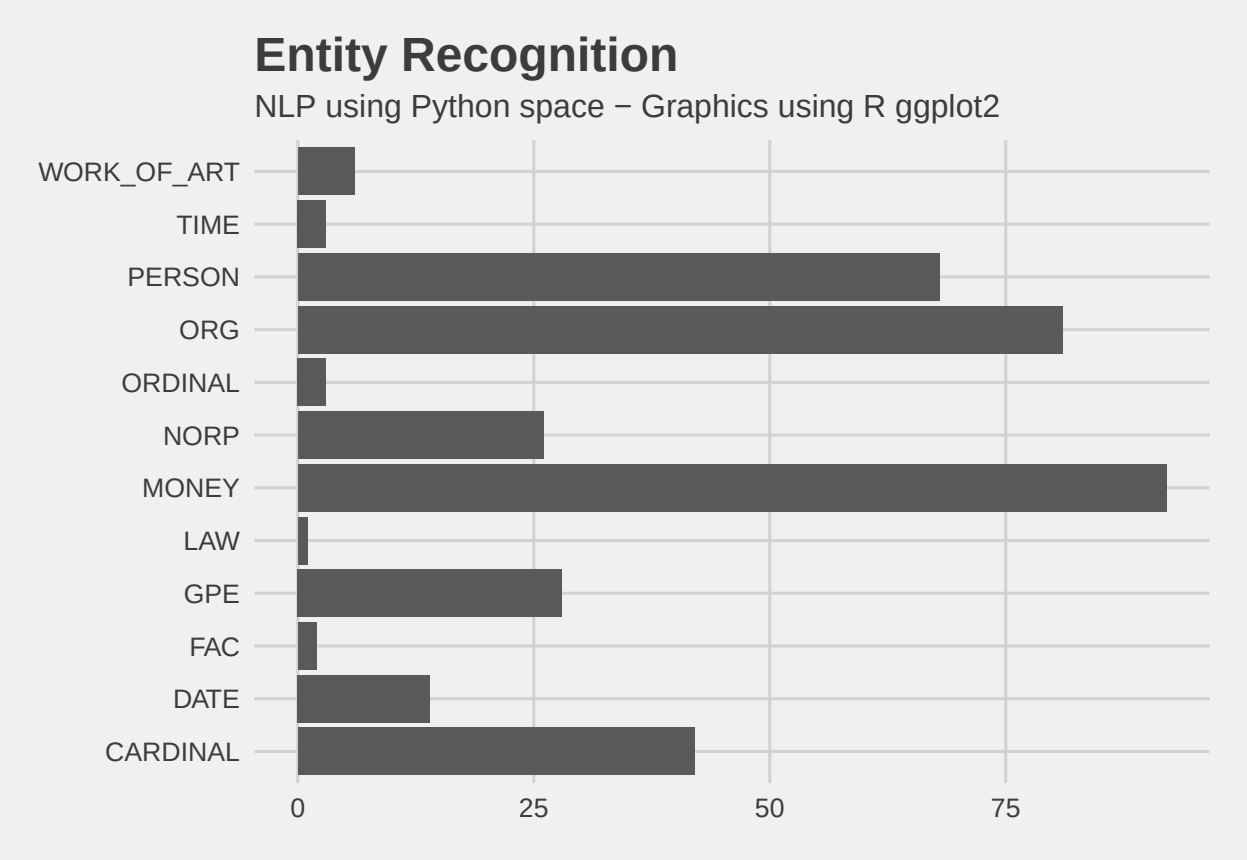


Now, Again The Python Code

```
ent_df = pd.DataFrame(columns = ["text","label"])
for ent in doc.ents:
    df1 = pd.DataFrame({"text" : ent.text,   "label" : ent.label_}, index = [0])
    #print(token.text, token.pos_)
    #print(df1)
    ent_df = pd.concat([ent_df,df1])
```

One Final Time, The R Code

```
py$ent_df %>%
  count(label) %>%
  ggplot() + geom_bar(aes(label,n), stat = "identity") +
  coord_flip() +
  #theme_solarized() +
  theme_fivethirtyeight() +
  labs(title = "Entity Recognition",
       subtitle = "NLP using Python space - Graphics using R ggplot2")
```


Entity Recognition
NLP using Python space − Graphics using R ggplot2
WORK_OF_ART
TIME
PERSON
ORG
ORDINAL
NORP
MONEY
LAW
GPE
FAC
DATE
CARDINAL
0
25
50
75