7506 - Organizacion de Datos - Finger 1

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Analisis del Dataset `train`

1. Librerias

In [1]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

2. Importo el Dataset

In [2]:
```
df_train = pd.read_csv("train.csv")
```

3. Caracteristicas Generales

In [3]:
```
#Dimension del DataFrame

df_train.shape
```

Out[3]:
```
(7613, 5)
```

In [4]:
```
#Tamaño del DataFrame (n° filas x n°columnas)

df_train.size
```

Out[4]:
```
38065
```

In [5]:

```
#Observo las 5 primeras filas

df_train.head()
```

Out[5]:

	id	keyword	location	text	target
0	1	NaN	NaN	Our Deeds are the Reason of this #earthquake M...	1
1	4	NaN	NaN	Forest fire near La Ronge Sask. Canada	1
2	5	NaN	NaN	All residents asked to 'shelter in place' are ...	1
3	6	NaN	NaN	13,000 people receive #wildfires evacuation or...	1
4	7	NaN	NaN	Just got sent this photo from Ruby #Alaska as ...	1

In [6]:

```
#Observo las 5 ultimas filas

df_train.tail()
```

Out[6]:

	id	keyword	location	text	target
7608	10869	NaN	NaN	Two giant cranes holding a bridge collapse int...	1
7609	10870	NaN	NaN	@aria_ahrary @TheTawniest The out of control w...	1
7610	10871	NaN	NaN	M1.94 [01:04 UTC]?5km S of Volcano Hawaii. htt...	1
7611	10872	NaN	NaN	Police investigating after an e-bike collided ...	1
7612	10873	NaN	NaN	The Latest: More Homes Razed by Northern Calif...	1

In [7]:

```
#Resumen del DataFrame

df_train.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 7613 entries, 0 to 7612
Data columns (total 5 columns):
 #   Column    Non-Null Count  Dtype 
---  ------    --------------  ----- 
 0   id        7613 non-null   int64 
 1   keyword   7552 non-null   object
 2   location  5080 non-null   object
 3   text      7613 non-null   object
 4   target    7613 non-null   int64 
dtypes: int64(2), object(3)
memory usage: 297.5+ KB
```

4. Analisis de Columna `text`

La columna `text` corresponde a *the text of the tweet*

In [9]:

```
#Observo los 5 primeros valores de la columna que estoy analizando

col = df_train["text"]
col.head()
```

Out[9]:

```
0    Our Deeds are the Reason of this #earthquake M...
1               Forest fire near La Ronge Sask. Canada
2    All residents asked to 'shelter in place' are ...
3    13,000 people receive #wildfires evacuation or...
4    Just got sent this photo from Ruby #Alaska as ...
Name: text, dtype: object
```

In [10]:

```
#Creo una nueva columna en el DataFrame donde agrego la longitud del tuit

df_train['longitud'] = df_train["text"].str.len()
```

In [37]:

```
#Me quedo con la porcion del DataFrame donde el Target es igual a 0

sub_df_0 = df_train[df_train['target'] == 0]
sub_df_0.head()
```

Out[37]:

	id	keyword	location	text	target	longitud
15	23	NaN	NaN	What's up man?	0	14
16	24	NaN	NaN	I love fruits	0	13
17	25	NaN	NaN	Summer is lovely	0	16
18	26	NaN	NaN	My car is so fast	0	17
19	28	NaN	NaN	What a goooooooaaaaaal!!!!!!	0	28

In [39]:

```
#Me quedo con la porcion del DataFrame donde el Target es igual a 1

sub_df_1 = df_train[df_train['target'] == 1]
sub_df_1.head()
```

Out[39]:

	id	keyword	location	text	target	longitud
0	1	NaN	NaN	Our Deeds are the Reason of this #earthquake M...	1	69
1	4	NaN	NaN	Forest fire near La Ronge Sask. Canada	1	38
2	5	NaN	NaN	All residents asked to 'shelter in place' are ...	1	133
3	6	NaN	NaN	13,000 people receive #wildfires evacuation or...	1	65
4	7	NaN	NaN	Just got sent this photo from Ruby #Alaska as ...	1	88

In [31]:

```
#Obtengo los estadisticos de Target 0

target_0 = sub_df_0['longitud'].describe()
```

In [32]:
```
#Obtengo los estadisticos de Target 1

target_1 = sub_df_1['longitud'].describe()
```

In [35]:
```
#Genero un nuevo DataFrame que contenga los dos resumenes estadisticos calcula
dos anteriormente

resumen_estadisticos = pd.DataFrame({'Target 0': target_0,'Target 1':target_1
})
resumen_estadisticos
```

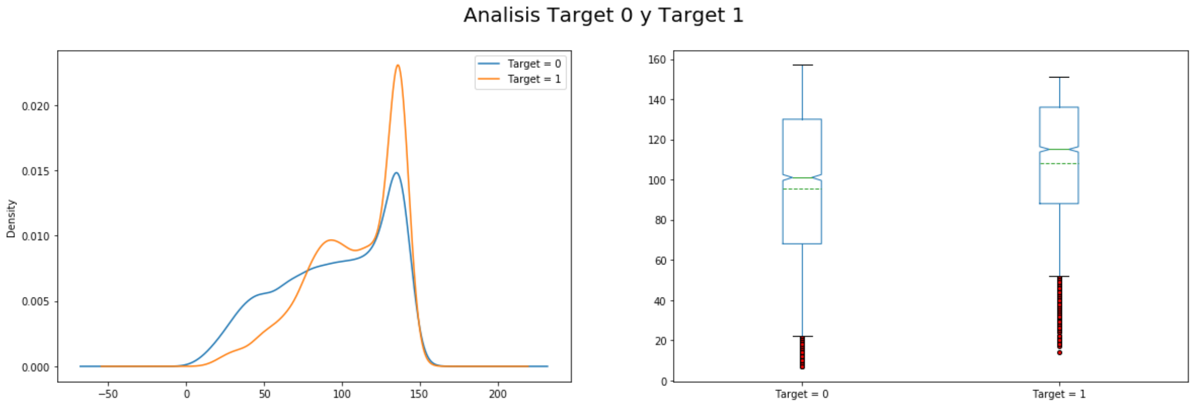
Out[35]:

	Target 0	Target 1
count	4342.000000	3271.000000
mean	95.706817	108.113421
std	35.885924	29.309854
min	7.000000	14.000000
25%	68.000000	88.000000
50%	101.000000	115.000000
75%	130.000000	136.000000
max	157.000000	151.000000

In [36]:
```
#Grafico las distribuciones para Target 0 y 1 - Graficos KDE y Boxplot en una
 sola Figura

datos = pd.DataFrame({'Target = 0':sub_df_0['longitud'],'Target = 1':sub_df_1[
'longitud']})
outliers = dict(marker='o', markerfacecolor='red', markersize=4,
                  linestyle='none')

fig,(ax1,ax2) = plt.subplots(1,2,figsize=(20,6))
fig.suptitle('Analisis Target 0 y Target 1',fontsize=20)
datos.plot.kde(ax=ax1)
datos.plot.box(ax=ax2,notch=True,flierprops=outliers, whis=0.75,meanline=True,
showmeans=True,showfliers=True)
plt.show()
```



Analisis Target 0 y Target 1