

# Universidad Pólitecnica Salesiana

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*Simulación*

*Tema:*

*Predicción de tendencia de twiter, con python*

In [1]:

```
1 import tweepy
2 import json, csv, sys
3 import numpy as np
4 from sklearn.metrics import mean_squared_error
5 from scipy.optimize import curve_fit
6 from scipy.optimize import fsolve
7 from sklearn import linear_model
8 import matplotlib.pyplot as plt
9 %matplotlib inline
10
11 consumer_key = "rF0agXMR0fUu58HGg750ZGeRQ"
12 consumer_secret = "VpduZzn2ZufMjGrPhKQhz0npzrfw47LdJjuk7IG9nbubTNuTkL"
13 access_token = "309077981-FEp6yFVY9uTimDwCYxcoLamgCuQ7bFTapYk71Lne"
14 access_token_secret = "tVacsM1EndkpyKy9gDnkskxtK2s3PKH6sCRi4XH7qmAeZ"
15
16 auth = tweepy.OAuthHandler(consumer_key, consumer_secret)
17
18 auth.set_access_token(access_token, access_token_secret)
19
20 api = tweepy.API(auth, wait_on_rate_limit=True, wait_on_rate_limit_notify=True)
21
22 #Obtner datos de mi usuario
23 #data = api.me()
24
25 #print(json.dumps(data._json, indent=2))
```

In [2]:

```
1  """data = api.get_user("@LassoGuillermo")
2  #print(json.dumps(data._json, indent=3))
3  item = json.loads(json.dumps(data._json, indent=3))
4  print(item)
5  for i in item:
6      print(i)
7  print("*****")
8  status = item["status"]
9  retweets = status["retweet_count"]
10 likes = status["favorite_count"]
11
12 print("Retweets ",retweets)
13 print("Likes ",likes)"""
```

Out[2]:

```
'data = api.get_user("@LassoGuillermo")\n#print(json.dumps(data._json, inden
t=3))\nitem = json.loads(json.dumps(data._json, indent=3))\nprint(item)\nfor
i in item:\n    print(i)\nprint("*****")\nstatus = item["status"]\nretw
eets = status["retweet_count"]\nlikes = status["favorite_count"]\n\nprint("R
etweets ",retweets)\nprint("Likes ",likes)'
```

In [57]:

```
1 c = 0
2 ids= []
3 rets=[]
4 for tweet in tweepy.Cursor(api.search, q="@LassoGuillermo").items(1000):
5     c+=1
6     #Para mostrar todos los datos
7     item = json.loads(json.dumps(tweet._json, indent=1))
8     #print(c)
9     #print('id',item["id"])
10    ret = item["retweet_count"]
11    #print('Retweet',ret)
12    entitie = item["entities"]
13    hast = entitie["hashtags"]
14    ids.append(c)
15    rets.append(ret)
16
17    #print("Hashtags=> ",hast)
18    #print("*\n")
19    #print(item)
20    #user = item['user']
21    #print("Usuario-> ",user)
22
23    #print("*****")
24 print('ids',ids)
25 print('N° ',c)
26 print('Retweets',rets)
```

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ids [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20,
21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39,
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N° 1000

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```

In [58]:

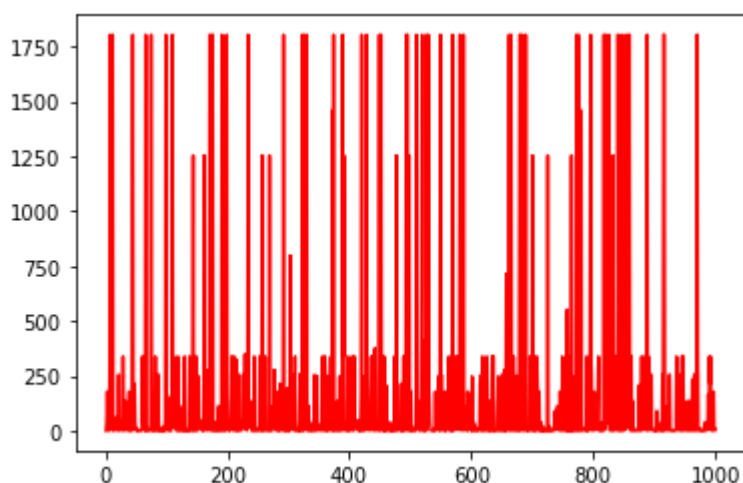
```

1 y=ids
2 x=rets
3 plt.plot(y, x, color="red")

```

Out[58]:

[<matplotlib.lines.Line2D at 0x23ced7048b0>]



In [59]:

```
1 regr = linear_model.LinearRegression()
2 regr.fit(np.array(x).reshape(-1,1),y)
```

Out[59]:

LinearRegression()

In [60]:

```
1 # Veamos los coeficientes obtenidos, En nuestro caso, serán la Tangente
2 print('Coefficients: \n', regr.coef_)
3 # Este es el valor donde corta el eje Y (en X=0)
4 print('Independent term: \n', regr.intercept_)
5 # Error Cuadrado Medio
```

Coefficients:  
[0.01350336]  
Independent term:  
498.1353723592678

In [61]:

```
1 n = 100
2 y_prediccion = regr.predict([[n]])
3 pred = int(y_prediccion)
4 print(pred)
```

499

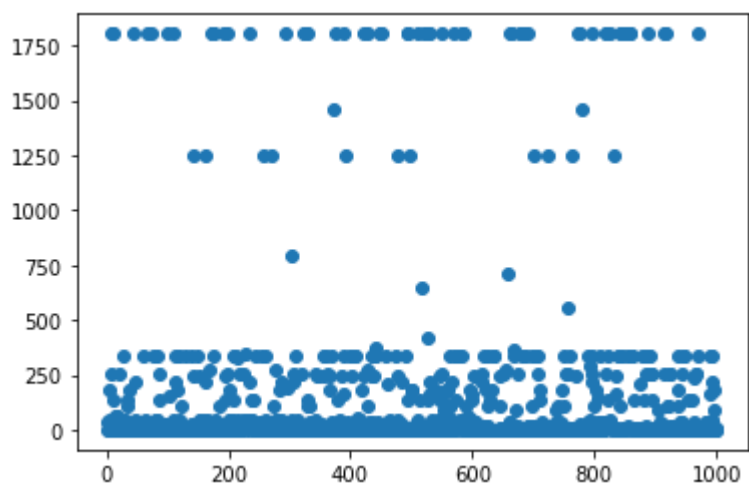
In [66]:

```
1
2 #print('y',y)
3 #print('x',x)
4 x_real = np.array(range(50, 100))
5 #print(x_real)
6 print(len(x_real))
7 print('\n')
8
9 x_reg=x_real
10 #print('x_reg',x_reg)
11
12
```

50

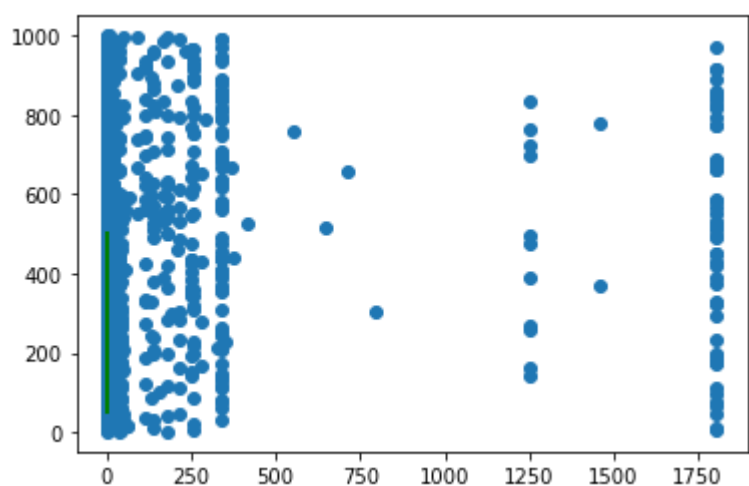
In [63]:

```
1 plt.scatter(y,x)
2 #plt.plot((x_real, regr.predict(x_real.reshape(-1, 1))), color='green')
3 plt.show()
```



In [67]:

```
1 plt.scatter(x,y)
2 plt.plot((x_real, regr.predict(x_real.reshape(-1, 1))), color='green')
3 plt.show()
```



In [ ]:

```
1
```

