



**BIRZEIT UNIVERSITY**

**AI PROJECT.**

**TWEET EMOTION DETECTION**

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```
D:\python\python.exe C:/Users/Owner/Desktop/projects/AI/pro2/FeturuNeg.py
('!', 4066)
(3692, 'من')
('❤️', 3561)
('..', 3393)
(2458, 'في')
('!', 2085)
('neg\\t', 1989)
(1806, 'و')
(1586, 'الله')
(':', 1554)
('🤔', 1441)
('!', 1362)
(1306, 'ما')
(1283, 'على')
(1011, 'ي')
('!', 951)
('😊', 912)
('🤔', 877)
('(', 877)
(871, 'كل')
(838, 'يس')
(824, 'يا')
(770, 'ي')
```

Fig 2: Negative File Word Tokenize

```
D:\python\python.exe C:/Users/Owner/Desktop/projects/AI/pro2/FetruPos.py
('!', 655)
(167, 'توى كانوا يشجعون ريال مدريد ضد النصر 🤔')
('!', 115)
('إمدار غريب .. لغرس سهلة جدا!', 48)
('خط دفاع بعاتي كثيرا!', 48)
('كتو .. املسا', 48)
('!- تراكم ❤️', 29)
('صباح الخير 😊 #حمين-عبدالغ', 28)
('! 📌 رفع صوت الموسيقى في الأماكن', 22)
('!', 20)
('!..', 18)
('!..', 16)
('😊', 15)
('! * يامن تملك عطاء حمأ أكابيل إمتنان علي هيئة شكر 📌', 15)
('! * يعطيك العافية', 15)
('❤️', 15)
('❤️', 15)
('الناس الي طلعت واحتفلت دي عارفة أن الشغل الجد يادوب جيداً!?!', 14)
('اسقاط النظام 📌', 14)
('❤️', 13)
('🤔', 12)
('الدعوة صابيه يا حبيبي 😊 و فيلها اساء لجدالله لا إلتزام بالحيداد و لا احترام', 12)
('❤️', 12)
```

Fig 3: Positive File Sentence Tokenize

```
D:\python\python.exe C:/Users/Owner/Desktop/projects/AI/pro2/FetruPos.py
('#', 4883)
('.', 3783)
('مسي', 3513)
('الله', 2828)
('علي', 2762)
('و', 2392)
('علي', 2248)
('pos\\t', 2031)
('و', 1991)
(':', 1908)
('😊', 1783)
('❤️', 1770)
('يا', 1647)
('يا', 1362)
('!', 1211)
('ما', 1015)
('-', 999)
('كلم', 998)
('❤️', 916)
('ب', 810)
('الله', 783)
('الله', 773)
('757', 757)
```

Fig 4: Positive File Word Tokenize

From the previous steps, we deduce the following features:

### 1- Emoji:

This feature takes the emoji inside the sentences and determines the weight of the positive and the negative in them. If the positive weight is dominant over the negative, we take the answer as 1, and vice versa we take -1, but if they are equal, we take 0.

### 2- Greetings and prayers:

In this feature, we check the tweets if they contain expressions of greeting and supplication. If it contains expressions, the answer is 1, and if it does not, the answer is 0.

### 3- Positive&Good:

In this feature, we check the tweets if they contain words denoting positivity and goodness. If it contains the words, the answer is 1, and if it does not, the answer is 0.

#### 4- Swear&Angry:

In this feature, we check the tweets if they contain expressions of swearing and anger. If it contains the words, the answer is 1, and if it does not, the answer is 0.

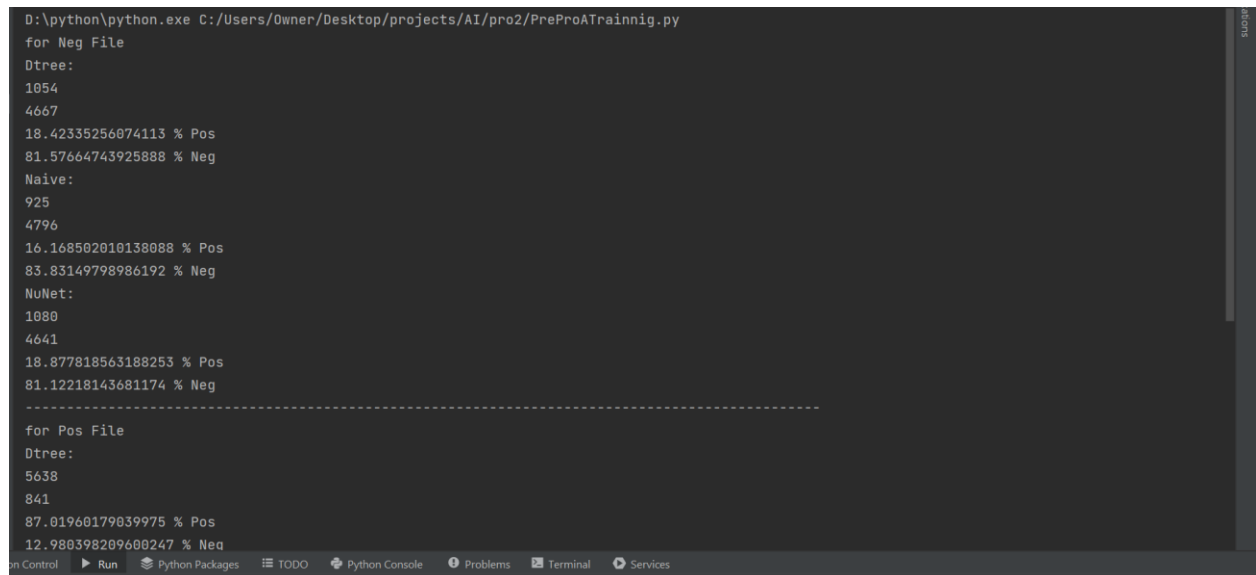
#### 5- Negative&Bad:

In this feature, we check the tweets if they contain words denoting badness and negative. If it contains the words, the answer is 1, and if it does not, the answer is 0.

From these features we can convert tweets to samples in the Data Set.

After that we apply our 3 classifiers which are:

Decision tree, Naive bayes, Neural network.



```
D:\python\python.exe C:/Users/Owner/Desktop/projects/AI/pro2/PreProATrainnig.py
for Neg File
Dtree:
1054
4667
18.42335256074113 % Pos
81.57664743925888 % Neg
Naive:
925
4796
16.168502010138088 % Pos
83.83149798986192 % Neg
NuNet:
1080
4641
18.877818563188253 % Pos
81.12218143681174 % Neg
-----
for Pos File
Dtree:
5638
841
87.01960179039975 % Pos
12.988398209600247 % Neg
```

Fig 5: Output Of Training & Testing1.

```
for Pos File
Dtree:
5638
841
87.01960179039975 % Pos
12.980398209600247 % Neg
Naive:
5410
1069
83.50054020682204 % Pos
16.49945979317796 % Neg
NuNet:
5655
824
87.28198796110512 % Pos
12.71801203889489 % Neg
for the DTree we have:
precision: 0.842498505678422
recall: 0.8701960179039975
F1-value: 0.8561233011920129

Process finished with exit code 0
```

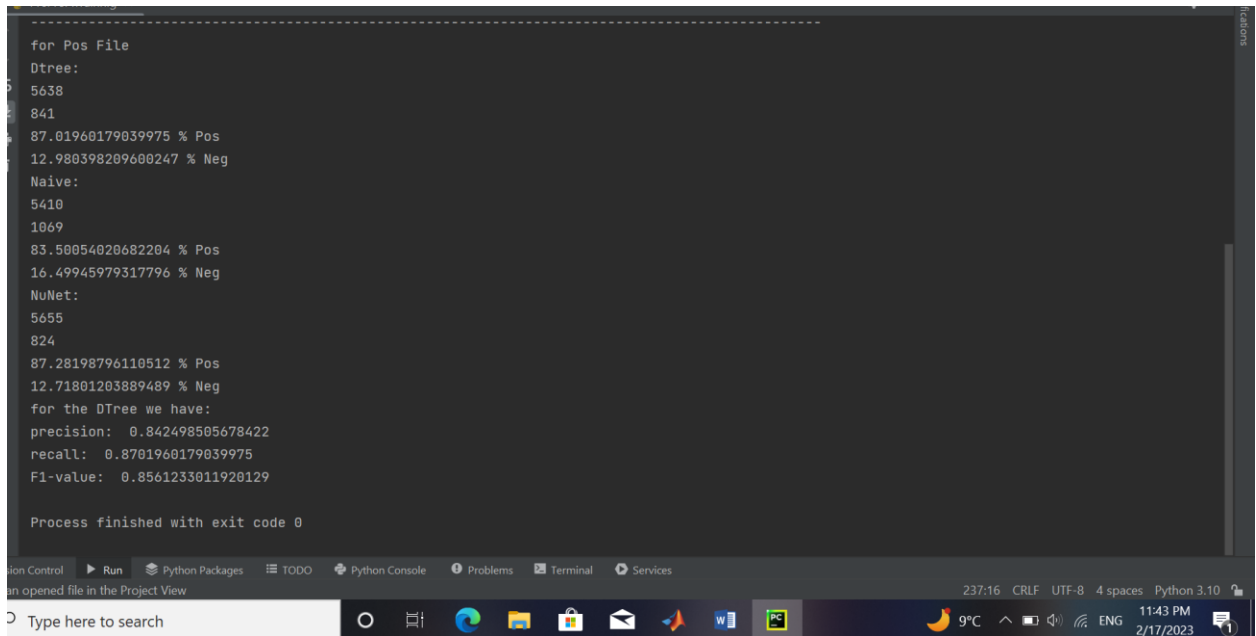


Fig 6: Output Of Training & Testing1.

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I hope you enjoy Our report.

Best wishes.