

ASSIGNMENT 3.1
on
Machine Learning Basics

Submitted by:
Haseebullah Shaikh (2303.KHI.DEG.015)
and
Faiza Gulzar Ahmed (2303.khi.deg.001)

Dated : 18th Apr 2023

Task 01: Implement a label coder for categorical data using pure python, pandas and numpy.

```
In [1]: import pandas as pd
```

Tweets emotions dataset downloaded from kaggle

```
In [2]: df = pd.read_csv("tweet_emotions.csv")
df
```

Out[2]:

	tweet_id	sentiment	content
0	1956967341	empty	@tiffanylue i know i was listenin to bad habi...
1	1956967666	sadness	Layin n bed with a headache ughhhh...waitin o...
2	1956967696	sadness	Funeral ceremony...gloomy friday...
3	1956967789	enthusiasm	wants to hang out with friends SOON!
4	1956968416	neutral	@dannycastle We want to trade with someone w...
...
39995	1753918954	neutral	@JohnLloydTaylor
39996	1753919001	love	Happy Mothers Day All my love
39997	1753919005	love	Happy Mother's Day to all the mommies out ther...
39998	1753919043	happiness	@niariley WASSUP BEAUTIFUL!!! FOLLOW ME!! PEE...
39999	1753919049	love	@mopedronin bullet train from tokyo the gf ...

40000 rows × 3 columns

```
In [3]: lst = df.sentiment.unique()
lst = list(lst)
lst.sort()
l = len(lst)
lst
```

Out[3]:

```
['anger',
 'boredom',
 'empty',
 'enthusiasm',
 'fun',
 'happiness',
 'hate',
 'love',
 'neutral',
 'relief',
 'sadness',
 'surprise',
 'worry']
```

```
In [4]: dic = {}
        for i in range(1):
            dic[lst[i]] = i

        dic
```

```
Out[4]: {'anger': 0,
        'boredom': 1,
        'empty': 2,
        'enthusiasm': 3,
        'fun': 4,
        'happiness': 5,
        'hate': 6,
        'love': 7,
        'neutral': 8,
        'relief': 9,
        'sadness': 10,
        'surprise': 11,
        'worry': 12}
```

```
In [5]: for row in df.iteruples():
        df.loc[row.Index, "sentiment"] = dic[df.loc[row.Index, "sentiment"]]
```

```
In [6]: df.sentiment.unique()
```

```
Out[6]: array([2, 10, 3, 8, 12, 11, 7, 4, 6, 5, 1, 9, 0], dtype=object)
```

```
In [7]: df
```

```
Out[7]:
```

	tweet_id	sentiment	content
0	1956967341	2	@tiffanylue i know i was listenin to bad habi...
1	1956967666	10	Layin n bed with a headache ughhhh...waitin o...
2	1956967696	10	Funeral ceremony...gloomy friday...
3	1956967789	3	wants to hang out with friends SOON!
4	1956968416	8	@dannycastillo We want to trade with someone w...
...
39995	1753918954	8	@JohnLloydTaylor
39996	1753919001	7	Happy Mothers Day All my love
39997	1753919005	7	Happy Mother's Day to all the mommies out ther...
39998	1753919043	5	@niariley WASSUP BEAUTIFUL!!! FOLLOW ME!! PEE...
39999	1753919049	7	@mopedronin bullet train from tokyo the gf ...

40000 rows × 3 columns