**Detecting-Fake-News-with-Python-and-Machine-Learning**

We will be hearing / Seeing lot of news through Social Media. Out of this many News are not real so how to check if the news what we hear is Fake / Real

The answer is Python. By practicing this advanced python project of detecting fake news, you will easily make a difference between real and fake news. Before moving ahead in this machine learning project, Let us know what is fake news, tfidfvectorizer, PassiveAggressive Classifier. Fake News : fake news encapsulates pieces of news that may be hoaxes and is generally spread through social media and other online media TfidfVectorizer : The number of times a word appears in a document is its Term Frequency. PassiveAggressive Classifier : Passive Aggressive algorithms are online learning algorithms. Such an algorithm remains passive for a correct classification outcome, and turns aggressive in the event of a miscalculation, updating and adjusting

About Detecting Fake News with Python This advanced python project of detecting fake news deals with fake and real news. Using sklearn, we build a TfidfVectorizer on our dataset. Then, we initialize a PassiveAggressive Classifier and fit the model. In the end, the accuracy score and the confusion matrix tell us how well our model fares.

**Libraries Used :**

1. numpy
2. pandas
3. itertools
4. sklearn.model
5. train\_test\_split
6. sklearn.feature\_extraction
7. TfidfVectorizer
8. sklearn.linear\_mode
9. PassiveAggressiveClassifier
10. sklearn.metrics
11. accuracy\_score,
12. confusion\_matrix

Steps Involved :

1. Importing Necessary Libraries

2. Reading the Data Set

3. Checking for Missing Values

4. Splitting the data for Train and Test

5. Build and Test the model

6. Building Confusion Matrix

7. Checking the Accuracy

Summary : We took a political dataset, implemented a TfidfVectorizer, initialized a PassiveAggressiveClassifier, and fit our model. We ended up obtaining an accuracy of 92.74%