**ITSM PROJECT REPORT**

(Priority of tickets Analysis)

**PROJECT SUMMARY:**

1. I am using Random Forest Algorithm to predict high priority tickets .

2. **Random forest algorithm can use both for classification and the regression kind of problems. In this, other tasks are performed through performing multitude of Decision Trees in a Training time and getting output of classes i.e. mean and mode of other classes.**

3.Random forest classifier will handle the missing values.

4.When we have more trees in the forest, random forest classifier won’t overfit  the model.

5.Can model the random forest classifier for categorical values also.

Ex: - It can be used for quality Assessment.

**Random Forest algorithm applications:-**

* Banking
* Health Care
* Stock Market
* E-Commerce

**REQUIREMENT:**

>> Data of ITSM tickets.

* Software:-
* Anacondas with Jupyter Notebook.
* Hardware:-
  + Intel processor with 3 GB or higher RAM.
  + 500 GB HDD.

**DATA PROCESSING:**

* Data processing occurs when data is collected and translated into usable information.
* Data processing starts with data in its raw form and converts it into a more readable format (graphs, documents, etc.)
* In the given dataset of Employee Performance, I checked its shape, data types, duplicates\_ values, null\_values, full information, etc.
* For achieving better result from the applied model the format of data has to be in a proper manner so the data processing is needed.
* The steps of Data Processing are- Data collection, Data Preparation, Data input, Processing, Data output/Interpretation, Data Storage.

**Modelling:**

Data divides into two parts:

Train model and

Test model

Train model has already trained and based on training model we predict test model.

I have taken 30% Test data and 70% Train data.

**Predicting:**

Here i predict Accuracy score from Random Forest Algorithm, Classification report and confusion matrix.

**Forecasting:**

It is performed via using ARIMA model.

**References:-**

* Counter (To count test data and predict data )
* Correlation (find out top factors to which effect the priority of tickets)
* Random Forest (Algorithm to predict of priority of tickets)
* Scaling (To find standardization and normalization)
* Forcasting (With the help of ARIMA model )

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