Methodology :

* Cluster and Random Forest Analysis of Student Performance
* PCA ( Principal Component Analysis )
* Decision Tree Analysis

Technique :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )
* SKlearn ( For Decision Tree )
* Matplotlib ( For plotting graph )
* Seaborn ( For PCA )

Findings :

* The graph of class -> Decision and class -> Raise Hand
* Cluster plotting using KMean Algorithm
* Plotting of data based on the Principal Component Analysis
* The Mean Square error for the Random Forest Classifier and KMean Algorithm

Link :

* <https://www.kaggle.com/znielsen/analysis-and-prediction-of-student-performance>

Methodology :

* Feature Classification
* Data Preparation

Technique :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )

Findings :

* Numerical Features from the dataset
* Categorical Features from the dataset

Link :

* <https://www.kaggle.com/slamnz/correlation-table-for-student-academ>

Methodology :

* Linear Classifier
* DNN ( Deep Neural Network )

Technique :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )
* TensorFlow ( For Linear Classifier and DNN )
* Seaborn ( For EDA )

Finding :

* The graph for the Class -> Discussion and Class -> Visit Resources.
* The Accuracy score for the Linear Classifier and Deep Neural Networks.

Link :

* <https://www.kaggle.com/biscuitlickz/student-grade-prediction>

Methodology :

* Random Forest Classifier for predicting the student performance
* GridSeachCV

Technology :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )
* Matplotlib ( For data visualization )
* Sklearn ( For Random Forest and GridsearchCV )

Findings :

* The confusion matrix and classification report for the Random Forest Classifier
* Hyper-Parameter which will suite best to the current dataset

Link :

* <https://www.kaggle.com/davified/random-forest-classifer-0-94-recall-rate>

Methodology :

* Data Analysis
* Feature Importance

Technique :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )
* Matplotlib ( For data visualization )
* Seaborn ( For EDA )

Findings :

* Count plot on the bases of [ Gender , class ]
* The accuracy score for the Decision Tree Classifier
* Apply the KFold Validation
* List of all features with importance percentage while training model

Link:

* <https://www.kaggle.com/pizero/general-dataset-analysis>

Methodology :

* EDA ( Exploratory Data Analysis )

Technique :

Findings :

* The count graph for the Integer Variable.
* The count graph for the factor Variable.
* Relationship with class variable and Integer Variable.
* Relationship with class variable and factor Variable.
* The co-relation graph for all the features.
* Visualizing the Decision tree based on the dataset
* Importance of each columns by RandomForest

Link :

* <https://www.kaggle.com/c34klh123/eda-for-student-data/report>

Methodology :

* Data Visualization

Technique :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )
* Matplotlib ( For data Visualization )
* Seaborn ( For EDA )

Findings :

* Sworn Plot [ High ,middle , low level student -> Raise hand , Visit Resource Variable , Announcement View ]
* The average score of the Jordan grades
* The average success score of the Chemistry Topic
* Relation with mother or father affect success of student
* Sworn Plot Discussion group participation
* Graph of Absence effect on success
* Positive and Negative Effect of these two variables [ Being Male , Live in Jordan , Work on chemistry , Relation with Mother , Participation Discussion , Absence Days (above 7) ]

Link :

* <https://www.kaggle.com/kanncaa1/factors-affecting-success-in-school/notebook>

Methodology :

* Hypothesis testing and Visualization

Technique :

* Ggplot2 ( For plotting the graph )

Findings :

* The graph based on the Number of Raise Hand and Gender

Link :

* <https://www.kaggle.com/syuzanna/hypothesis-testing-and-visualization>

Methodology :

* Random Forest Classification Algorithm

Technique :

Findings :

* Mean Decrease Accuracy of all the features
* Mean Decrease Gini of all the features

Link :

* <https://www.kaggle.com/syuzanna/randomforest>

Methodology :

* Decision Tree Algorithm

Technique :

* Caret

Findings :

* Visualization of Decision Tree based on the features in the dataset

Link :

* <https://www.kaggle.com/syuzanna/decision-tree/notebook>

Methodology :

* Naive Bayes Algorithm

Technique :

* Caret

Findings :

* The graphs of the naïve bayes algorithm with True Positive and False Positive

Link :

* <https://www.kaggle.com/syuzanna/naive-bayes>

Methodology :

* Data Analysis
* Machine Learning Algorithm
* Dimensionality Reduction

Techniques :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )
* Seaborn ( For EDA )
* Matplotlib ( For data visualization )
* Sklearn ( For Machine Learning Algorithm )

Findings :

* Count Plot for visualization of data [ Gender , Relation , Topic , Section ID , Grade ID , Nationality , Class , Stage ID , Semester , Parent Answering Survey , Parent School satisfaction , Student Absence Day ]
* The graphs of Dimensionality Reduction of all the feature available
* The graphs of Scaled Algorithm Comparison with all the trained model [ LR , Lasso , EN , KNN , DTR , SVR ]
* Tuning the Lasso algorithm
* Scaled Ensemble Algorithm Comparison with Standard Scaler and [ AB , GBR , RF , ET ] and KFold validation.
* Men Square Error for the AdaBoost and Lasso

Link :

* <https://www.kaggle.com/rocki37/students-scores-analysis>

Methodology :

* Data Analysis
* Predicting the Values with the help of Machine Learning

Technique :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )
* Matplotlib ( For data visualization )
* Seaborn ( For EDA )
* Sklearn ( For Machine Learning Algorithm )

Findings :

* Get the Accuracy for the Logistic Regression , SVC , Gaussian NB , Decision Tree Classifier , Decision Tree Classifier , Random Forest Classifier and get the confusion matrix of all the algorithms.

Link :

* <https://www.kaggle.com/kartikjoshi09/academic-performance-student-xapi>

Methodology :

* Data Visualization
* Classification Algorithm

Technique :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )
* Matplotlib ( For data visualization )
* Sklearn ( For Classification Algorithm )

Findings :

* Count Plot of the [ Number of Student by gender , Most Popular Topic , Most Present Nationality , School Level , Number of Discussion ]
* The accuracy score , Precision Score , Confusion matrix and f1 score for the Logistic Regression , Naïve Bayes , Linear SVM , KNN , Random Forest.

Link :

* <https://www.kaggle.com/pedroharagao/classification-algorithms-applied-to-educational>

Methodology :

* Data Exploration
* Machine Learning

Technique :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )
* Matplotlib ( For data visualization )
* Sklearn ( For Machine Leaning Algorithms )

Findings :

* Count Plot for the [ Class (Respect to the L,H,M) , Gender , Gender ( with respect to the L,M,H ) , Nationality , Nationality (With respect to the L,M,H) , Place of Birth ( With Respect to the L,M,H ) ,Stage ID , Stage ID ( with Respect to the L,M,H ) , Grade ID , Grade ID ( with respect to the L,M,H ) , Section ID , Section ID (with respect to the L,M,H)]
* Maximum Score , Minimum Score , Average Score , Minimum Prediction , Maximum Prediction , Average Prediction for the perceptron Classifier
* RBF [ Minimum , Maximum , Average ] Score , Linear [ Minimum , Maximum , Average ] , Polynomial [ Minimum , Maximum , Average ] Score , Sigmoid [ Minimum , Maximum , Average ] Score , Prediction Misses [ RBF , Linear , Polynomial , Sigmoid ]
* 3-Depth Tree [ Minimum , Maximum , Average ] Scores and 5-Depth Tree [ Minimum , Maximum , Average ] Score
* The Final Result Average Accuracy Score of all the Algorithms [ Perceptron , SVM(rbf) , SVM(linear) , SVM(polynomial(1)) , SVM(polynomial(2)) , SVM(polynomial(3)) , SVM(polynomial(5)) , SVM(Sigmoid) , Random Forest (depth=3) , Random Forest (depth=5)]

Link :

* <https://www.kaggle.com/entropicinertia/predicting-student-academic-performance>

Methodology :

* Data Analysis
* Machine Learning

Technique :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )
* Matplotlib ( For data visualization )
* Seaborn ( For EDA )
* Sklearn ( For Machine Learning Algorithms )

Findings :

* BoxPlot and Swarn Plot for [ Class -> Raise Hand , Class -> Visit Resources , Class -> Announcement , Class -> Discussion]
* Factor plot for [ Class -> Parent Answering Survey , Class -> Parent School Satisfaction , Class -> Student Absence Days ]
* F1 Score , Accuracy Score and Classification Report for the Linear Regression and Random Forest Classifier

Links :

* <https://www.kaggle.com/chengpp/notebook1dd4a74262>

Methodology :

* Exploratory Data Analysis
* Data Cleaning
* Data Visualization
* Feature Engineering

Technique :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )
* Matplotlib ( For data visualization )
* Seaborn ( For EDA )
* Sklearn ( For Machine Learning Algorithms )

Findings :

* The histogram of No. of Student vs No. of student Raised their hands on particular time.
* The graphs based on [ Gender (High , Low , Medium) , Students from the country , Stage ID (High , Low , Medium) , Grade ID (High , Low , Medium) , Topics , Topic (High , Low , Medium) , Relation With Parents , Parent School Satisfactory , Parent Answering Survey ]
* The graph of the Feature Importance with F Score.
* The Kdeplot for topic with respect to the High , Low , Medium
* The Co-relation Graph for the every features with each other.
* Accuracy score and classification Report for the [ SVC , Random Forest Classifier , Logistic Regression , Multi-Layer Perceptron , XGBoost ]

Link :

* <https://www.kaggle.com/nasirislamsujan/an-eda-on-sap>

Methodology :

* Data Visualization
* Exploratory Data Analysis
* XGBoost
* Deep Learning

Technique :

* NumPy ( For Linear Algebra )
* Pandas ( For data processing )
* Matplotlib ( For data visualization )
* Seaborn ( For EDA )
* Sklearn ( For Machine Learning Algorithms )
* Plotly ( For data visualization )

Findings :

* The graphs on [ Gender , Nationality , Place of Birth , Stage ID ( Middle school , lower level , High level ) , Grade ID , Topic (with respect to vote count) , Percentage and Semester , Relation of Mother and Father , Raise Hand and Percentage , Parent School Satisfaction and Percentage , Parent Answering Survey and Percentage , Student Absence Day and Percentage , Class and Percentage ]
* The count Graph of the [ Class , Gender , Stage ID (Low , Medium , High) , Semester , Topic , Nationality , Topic (M,F) , Nationality (M,F) , Nationality (Father , Mother) , Nationality (Above-7 and Under-7) ]
* The Subplot on [ Class and Visit Resources (L,M,H) , Class and Announcement(L,M,H) , Class and Raise Hand (L,M,H) , Class and Discussion (L,M,H) , Gender and Raise Hands , Gender and Discussion ]
* The Swarm Plot on [ Gender and Announcement , Gender and Raise Hands ]
* The Box Plot on [ Class and Discussion , Class and Visit Resources ]
* The Point Plot on [ Semester and Visit Resource , Semester and Announcement ]
* The regression Plot [ Raise Hand and Visit Resource , Announcement View and Discussion ]
* Graph Analysis of Gender Vs Place of Birth
* Accuracy Score and Classification Report of [ Logistic Regression and XGBoost ]
* Feature Importance graph to the Features in the dataset

Link :

* <https://www.kaggle.com/harunshimanto/student-s-academic-performance-with-ml-eda>

Methodology :

* Data Visualization

Technique :