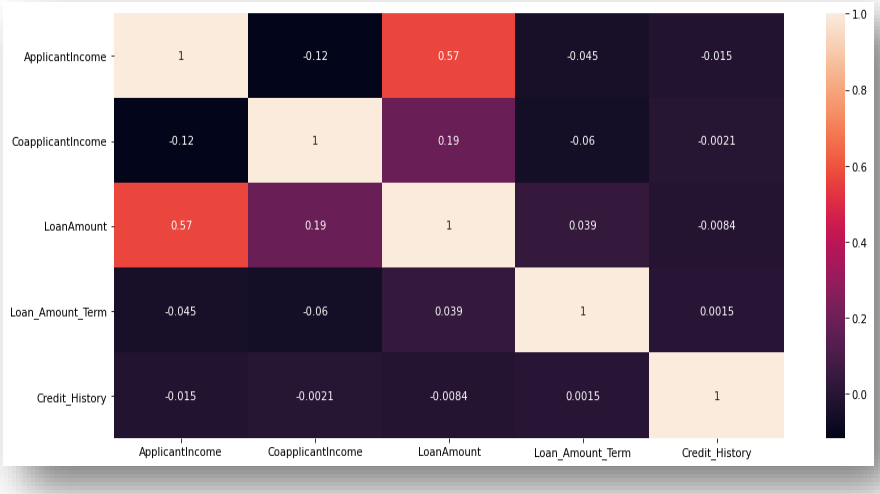
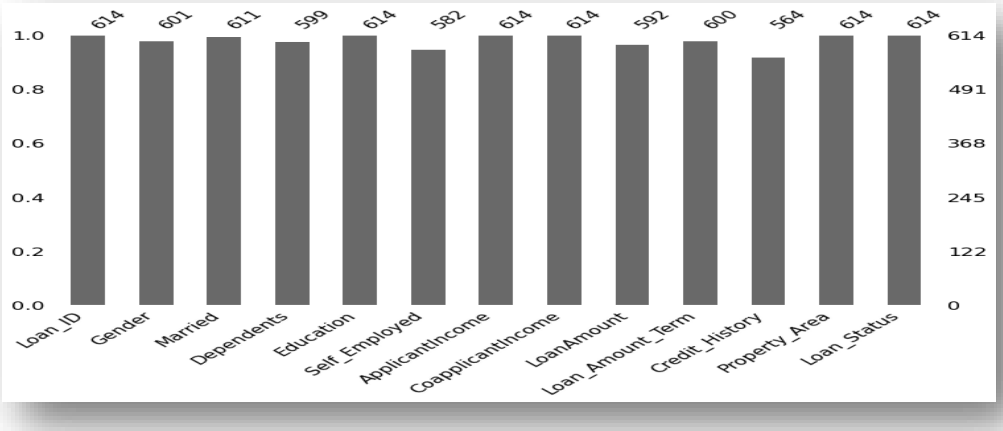
DATA ANALYSIS

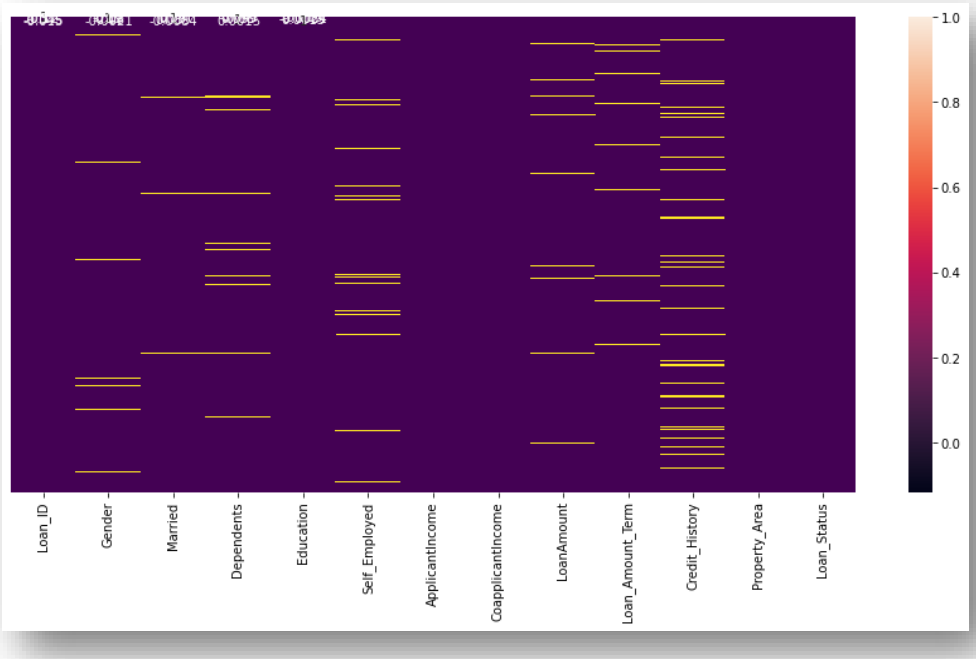
1. Heat map of pair wise data correlation between the columns excluding the Nan values.



2. Bar Plot for number of missing values in each column.

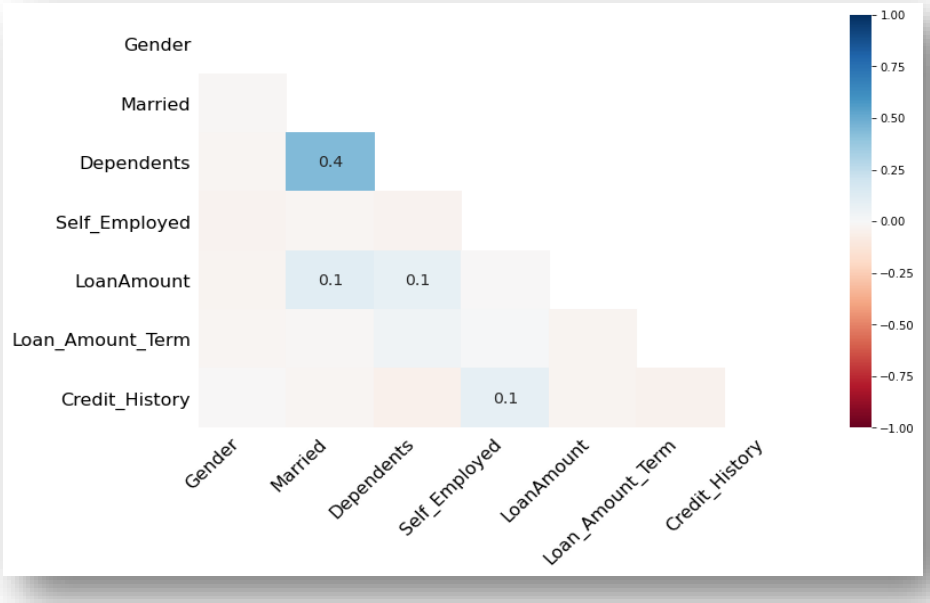


3. Heat map for missing values in all the columns.

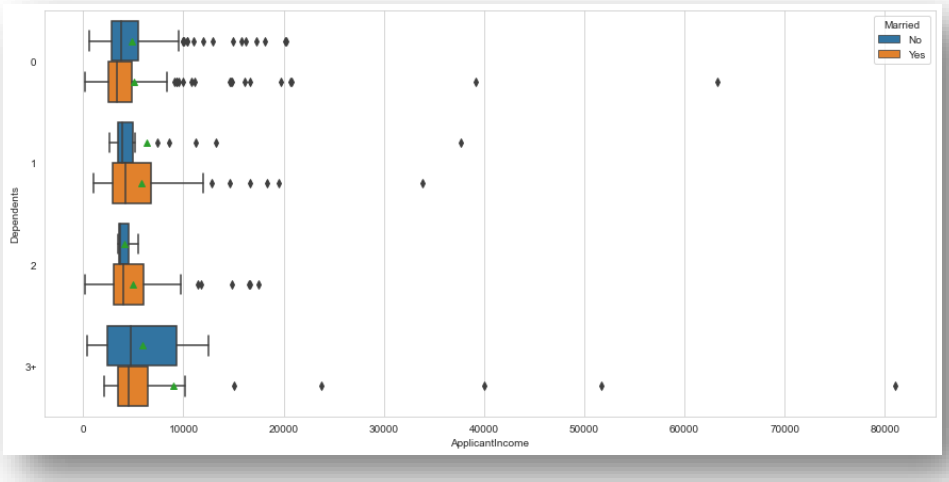


DATA ANALYSIS

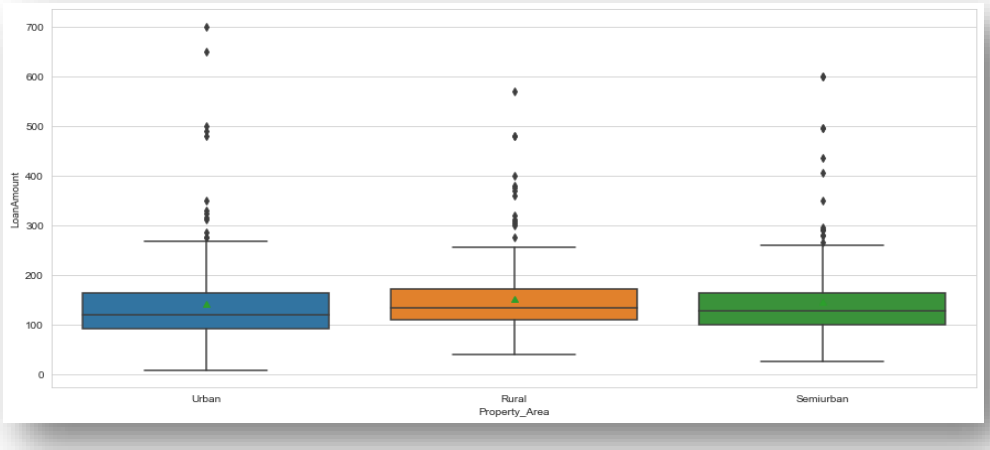
4. Heat map of pair wise data correlation between the columns of Nan values.



5. Box Plot of dependents VS applicant income with marriage as an criteria.

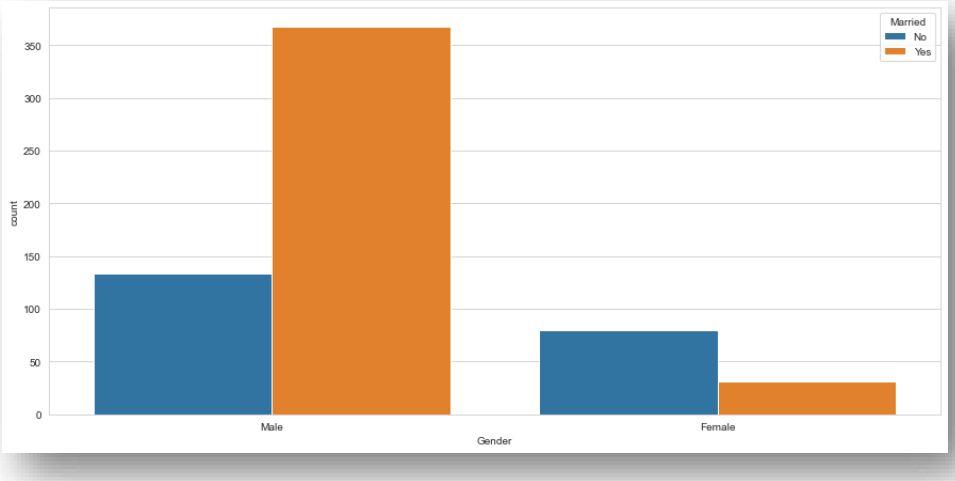


6. Box Plot of property area VS loan amount.

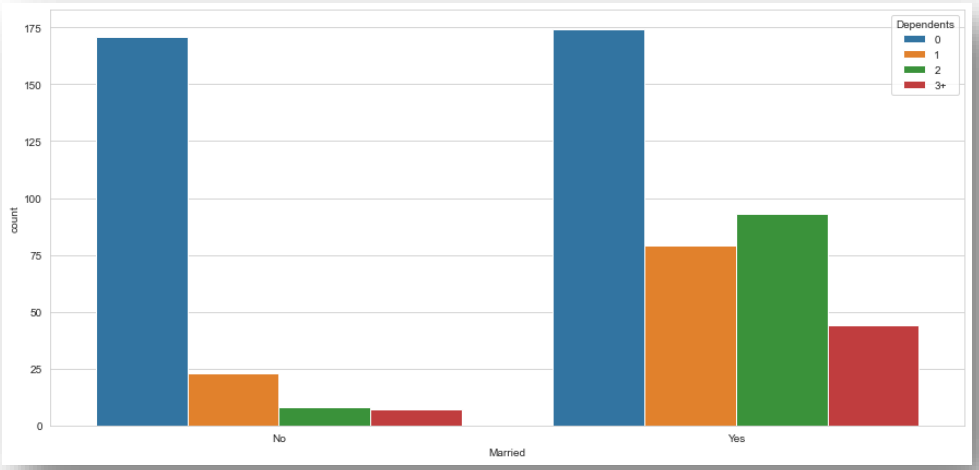


DATA ANALYSIS

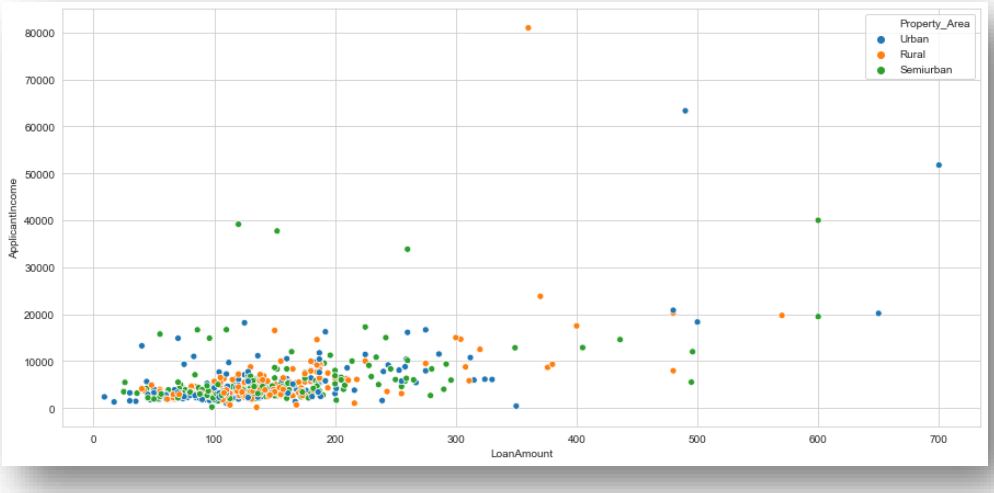
7. Count Plot of married or unmarried people based on gender.



8. Count plot of dependents based on marital status of applicants.

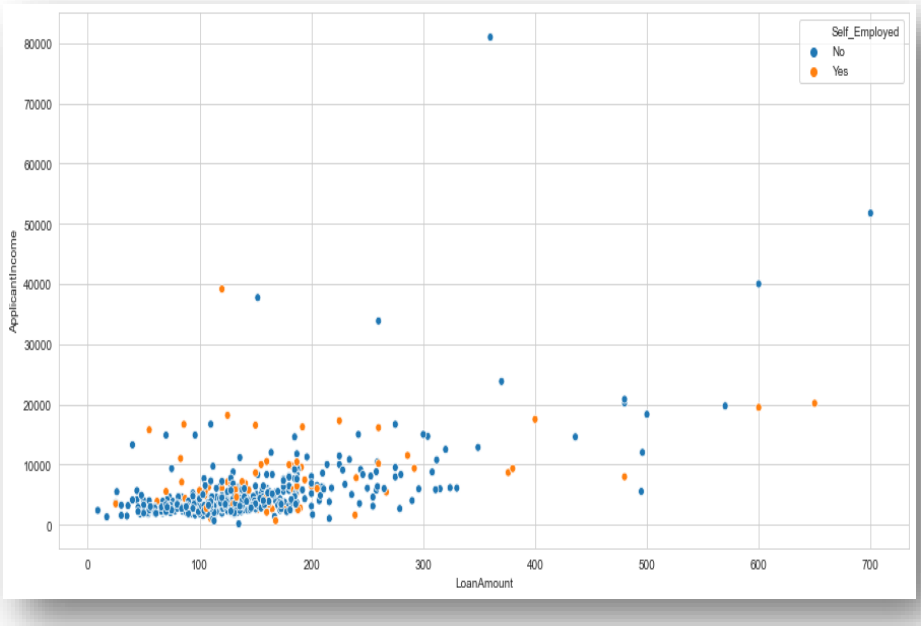


9. Scatter Plot of loan amount applied according to the applicant income and property location.

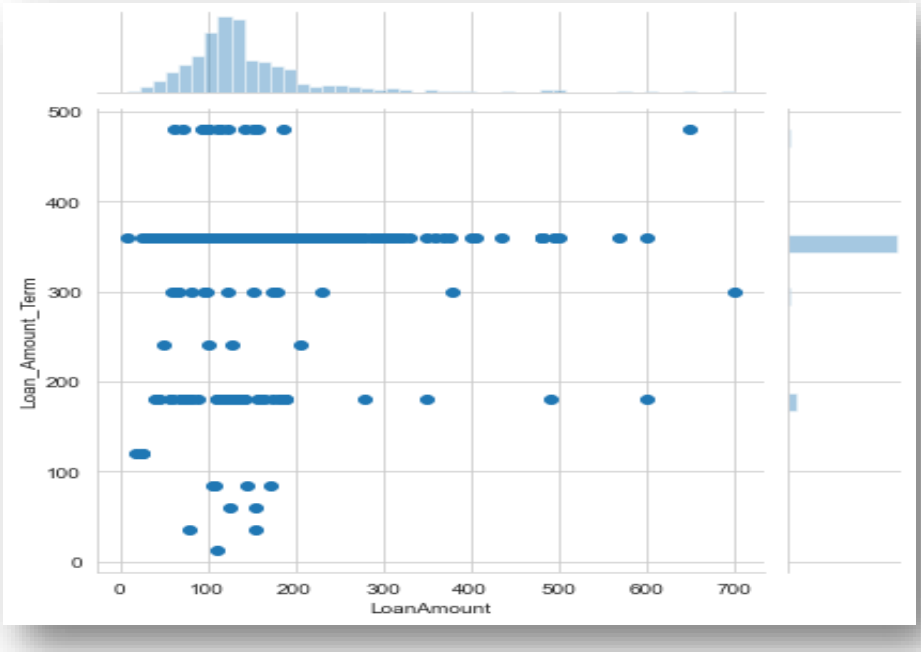


DATA ANALYSIS

10. Scatter Plot of loan amount VS applicant income based on the self-employment status.



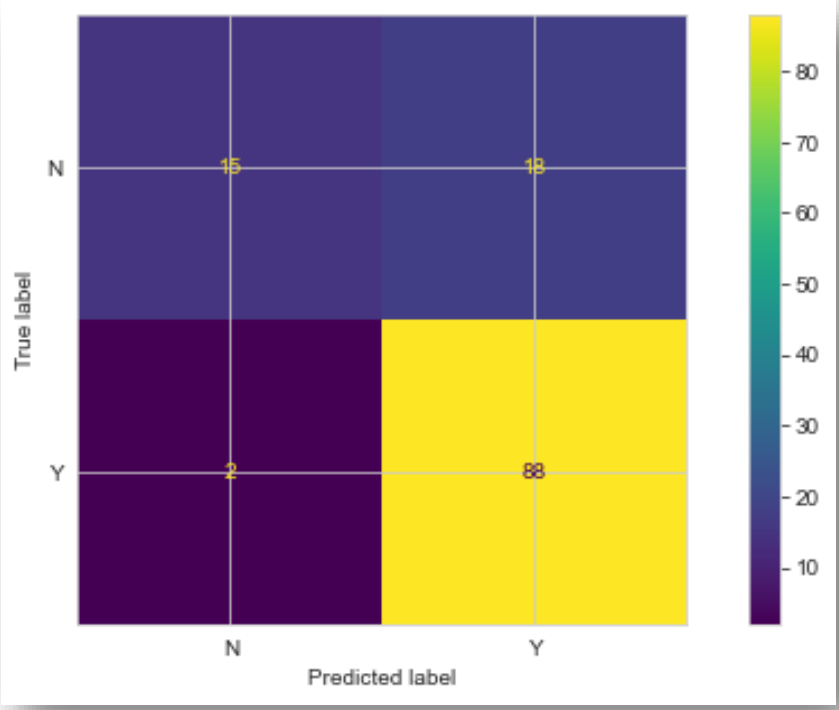
11. Joint plot of loan amount VS loan amount term.



DATA ANALYSIS

12. Pair plots to visualize the relationship between each variable.

13. Confusion matrix.



14. Classification report.

```
In [42]: print(classification_report(y_test,y_pred))
              precision    recall  f1-score   support

           N       0.88      0.45      0.60        33
           Y       0.83      0.98      0.90        90

    accuracy                           0.84       123
   macro avg       0.86      0.72      0.75       123
weighted avg       0.84      0.84      0.82       123
```

15. Accuracy achieved for various ML algorithms.

```
In [11]: print("For Logistic Regression =" + str(LR_accuracy*100))
    ...: print("For KNearest Neighbors =" + str(KNN_accuracy*100))
    ...: print("For Random Forest =" + str(RF_accuracy*100))
    ...: print("For Naive Bayes =" + str(NB_accuracy*100))
    ...: print("For Support Vector Machine =" + str(svc_accuracy*100))
For Logistic Regression =83.73983739837398
For KNearest Neighbors =78.86178861788618
For Random Forest =82.92682926829268
For Naive Bayes =82.92682926829268
For Support Vector Machine =82.92682926829268

In [12]:
```