Capstone Project for Crop Recommendation Final report

1.Dataset Name Crop_recommendation from Kaggle as csv file

2.In this dataset input -N(Nitrogen),P(phosphorous),K(Potassium),temperature,humidity,ph,rainfall

Output-label

3.in this data output has categorical data,so we go to ML Classification Analysis

4.Temperature,humidity,ph has high VIF correlation value . so we avoide multicollinearity we take onlyN,P,K,rainfall.

5.In Feature selection –chai's value for classification RandomForest has 0.990909

6. In RFE value for Random forest has 0.989091

7.According to featureselection,I select RandomForestClassification Model as final model

And get the accuracy value is 0.930303

8.Due to this above accuracy 0.930303 I did GridSearchCV ConfusionMatrix

Through Heatmap get Accuracy 93.03%

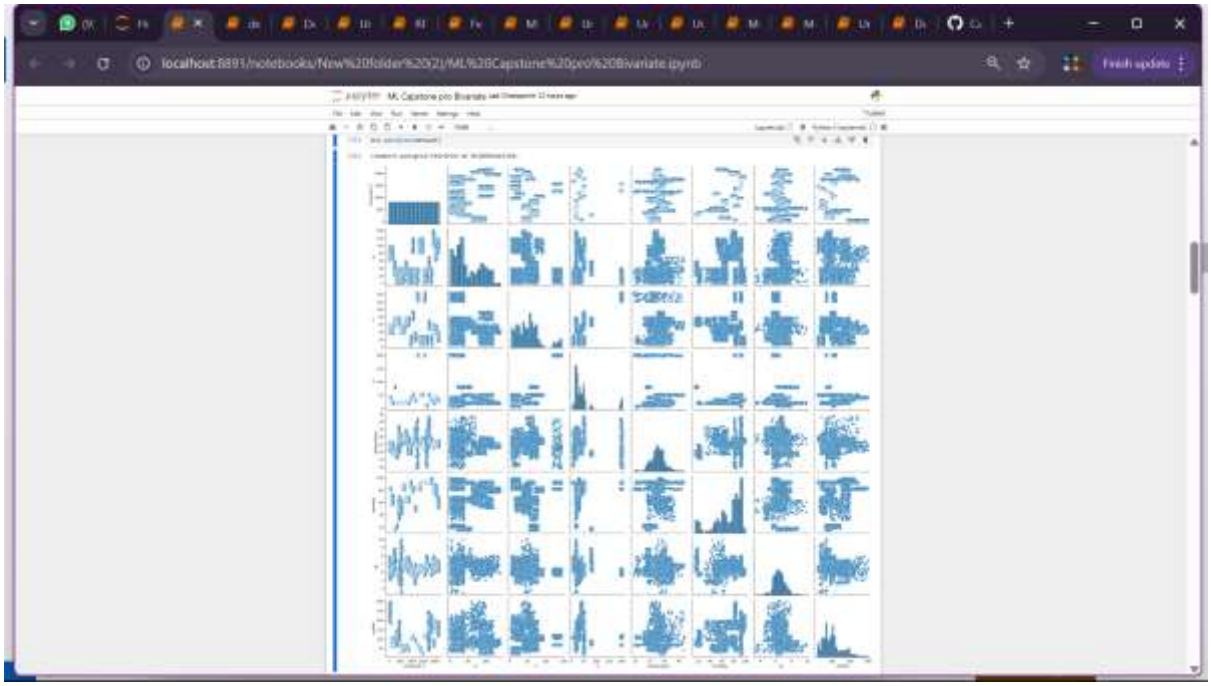
9.From univariate analysis I submitted without outliers descriptive column

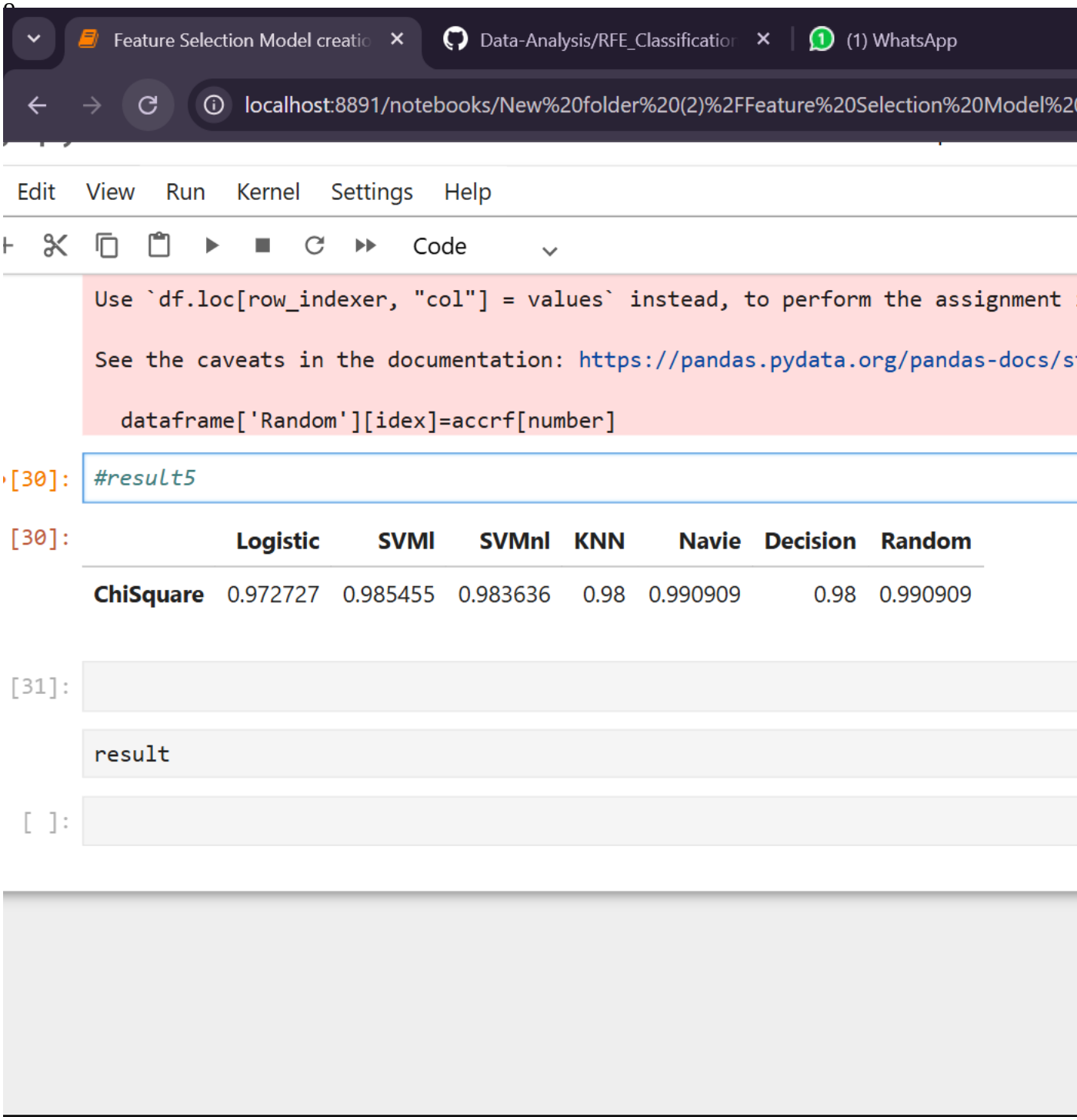
10.In Bivariate analysis I submitted pairplot using seaborn library

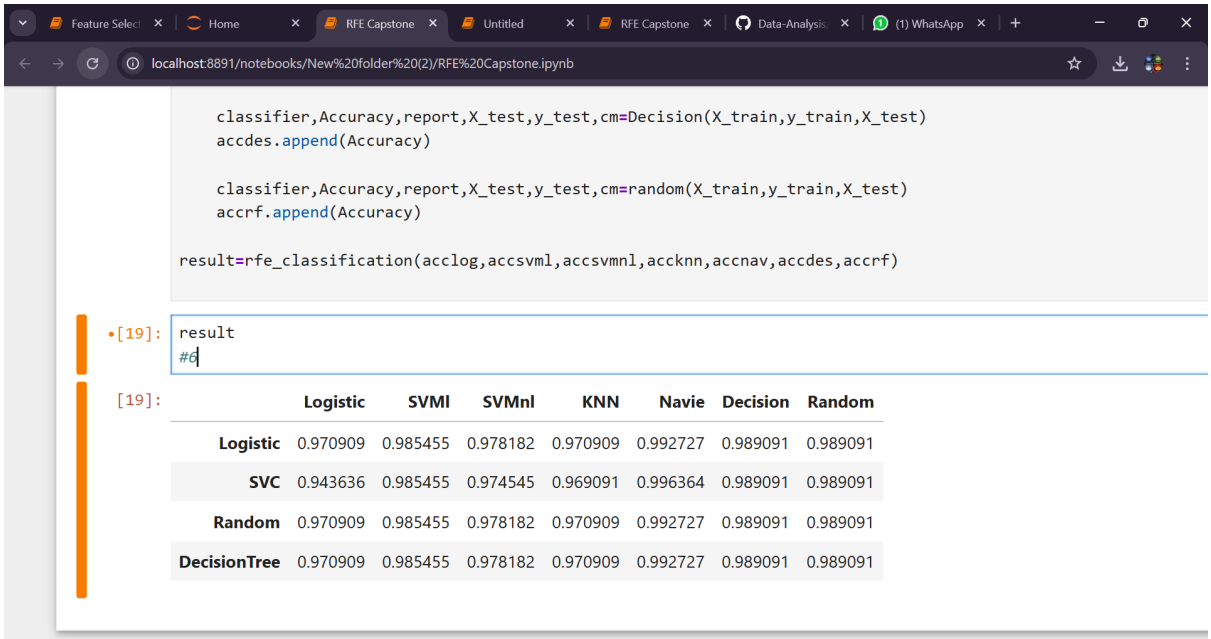
11.I finalized the model and save the model.

12.Finally Deployment is done and predict the output and call to action

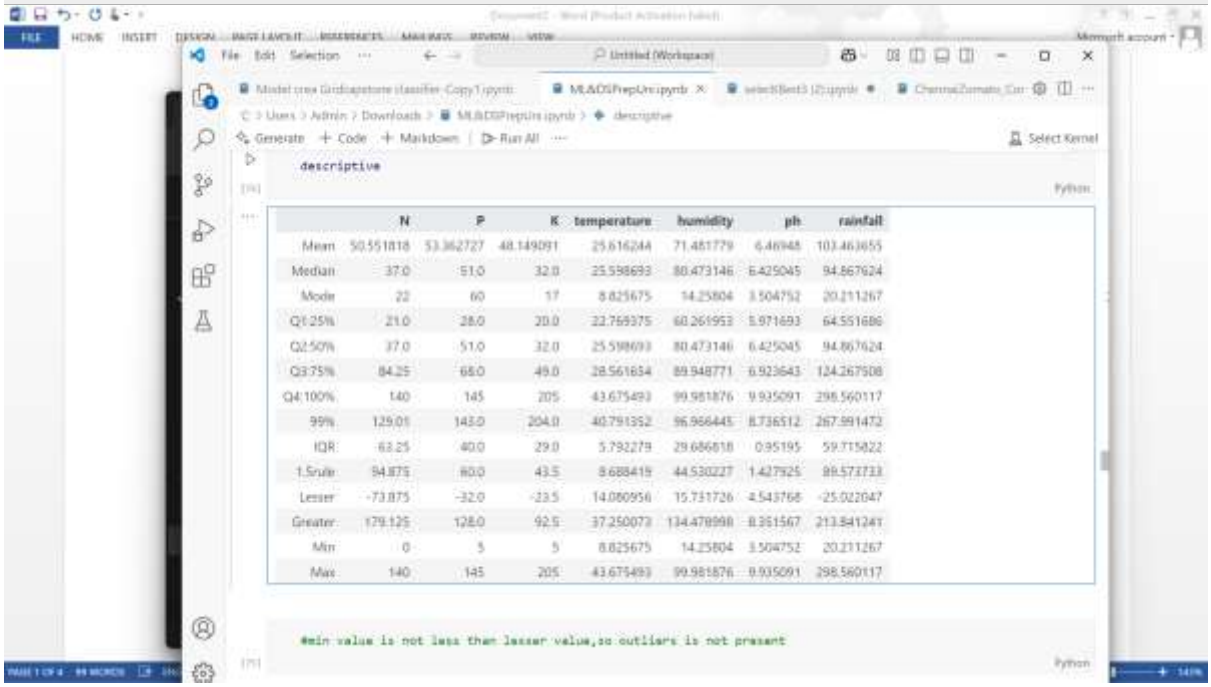
I submitted all related ipython Notebook files in gitup

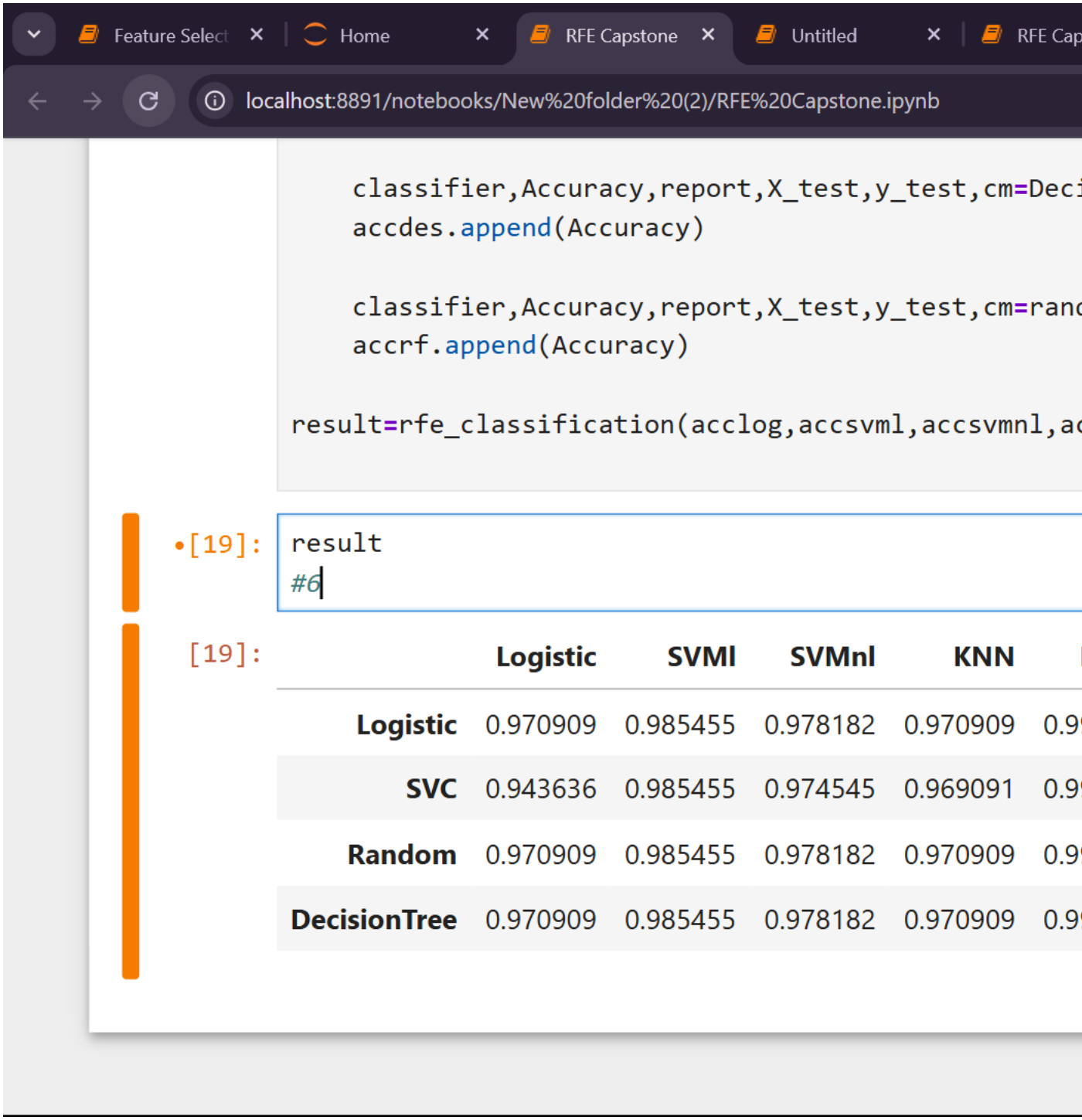



Feature Selection Model creatic
Data-Analysis/RFE_Classificatior
(1) WhatsApp
localhost:8891/notebooks/New%20folder%20(2)%2FFeature%20Selection%20Model%2
Edit View Run Kernel Settings Help
Code
Use `df.loc[row_indexer, "col"] = values` instead, to perform the assignment
See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/s
dataframe['Random'][idex]=accrf[number]
[30]:
#result5
[30]:
Logistic SVMl SVMnl KNN Navie Decision Random
ChiSquare 0.972727 0.985455 0.983636 0.98 0.990909 0.98 0.990909
[31]:
result
[ ]:



	Logistic	SVMl	SVMnl	KNN	Navie	Decision	Random
Logistic	0.970909	0.985455	0.978182	0.970909	0.992727	0.989091	0.989091
SVC	0.943636	0.985455	0.974545	0.969091	0.996364	0.989091	0.989091
Random	0.970909	0.985455	0.978182	0.970909	0.992727	0.989091	0.989091
DecisionTree	0.970909	0.985455	0.978182	0.970909	0.992727	0.989091	0.989091

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classifier,Accuracy,report,X_test,y_test,cm=Deci
accdes.append(Accuracy)
classifier,Accuracy,report,X_test,y_test,cm=rand
accrf.append(Accuracy)
result=rfe_classification(acclog,accsvml,accsvmnl,ac
[19]:
result
#6
[19]:
Logistic
SVMl
SVMnl
KNN
Logistic 0.970909 0.985455 0.978182 0.970909
SVC 0.943636 0.985455 0.974545 0.969091
Random 0.970909 0.985455 0.978182 0.970909
DecisionTree 0.970909 0.985455 0.978182 0.970909