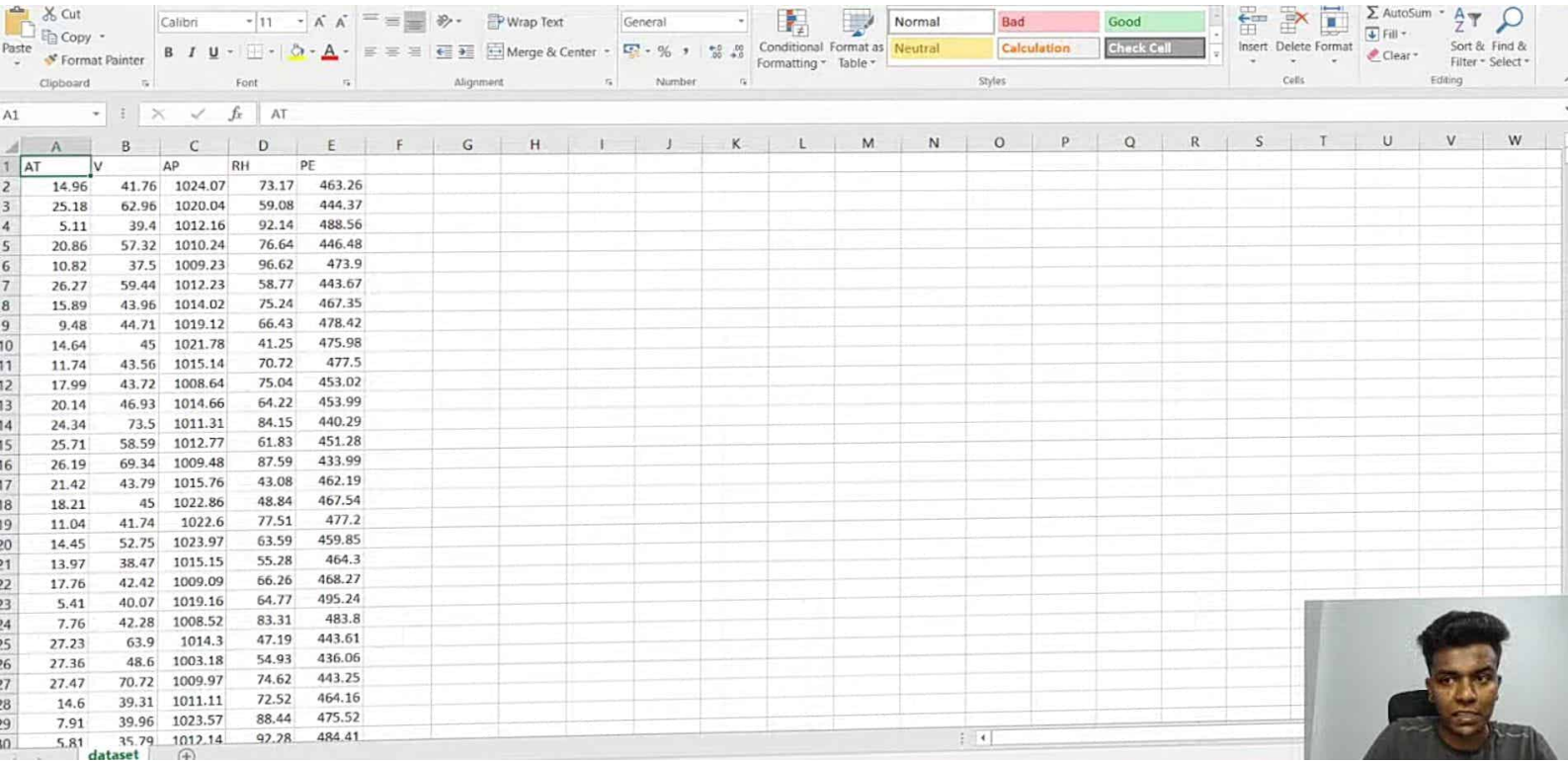
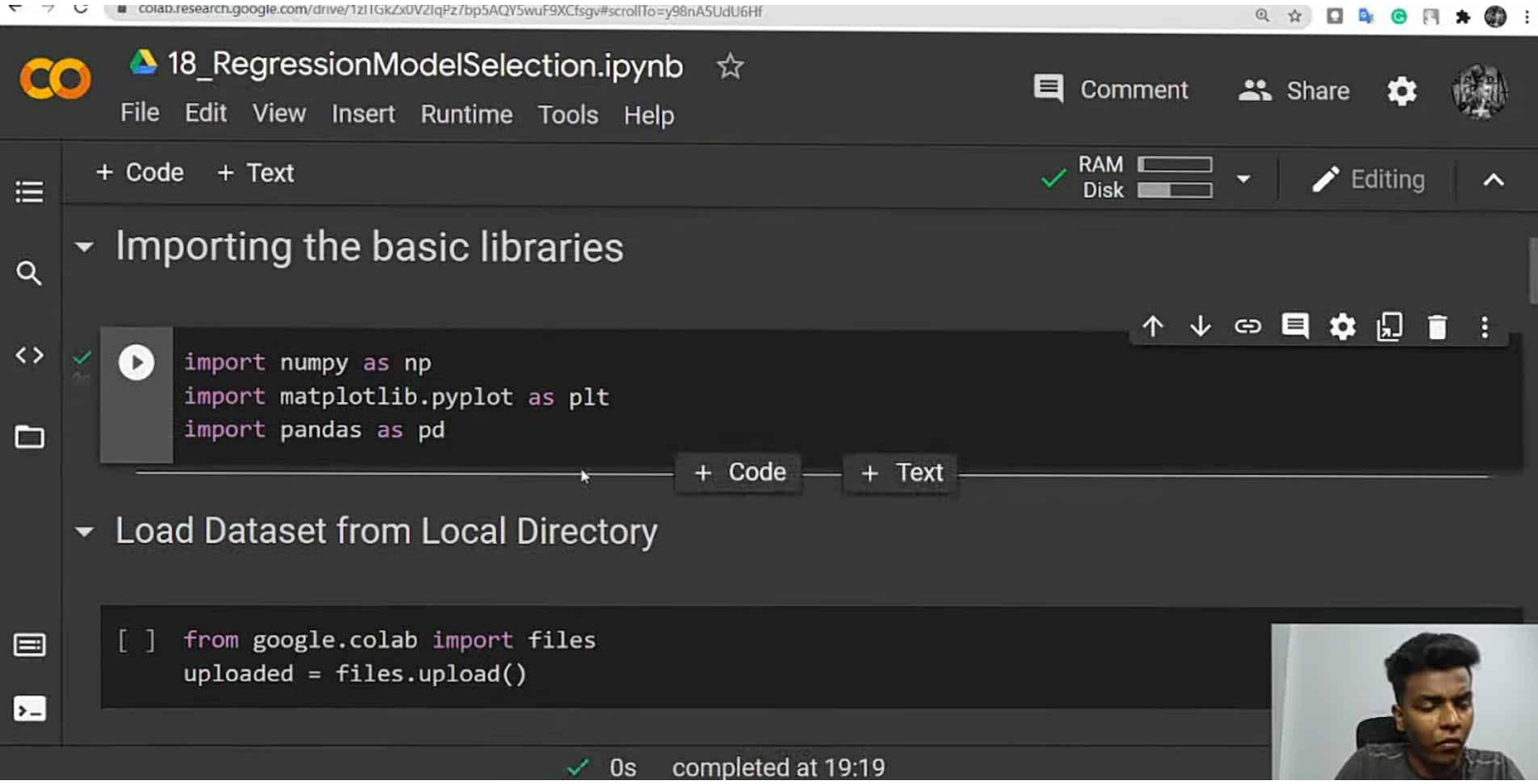


	A	B	C	D	E
1	AT	V	AP	RH	PE
2	14.96	41.76	1024.07	73.17	463.26
3	25.18	62.96	1020.04	59.08	444.37
4	5.11	39.4	1012.16	92.14	488.56
5	20.86	57.32	1010.24	76.64	446.48
6	10.82	37.5	1009.23	96.62	473.9
7	26.27	59.44	1012.23	58.77	443.67
8	15.89	43.96	1014.02	75.24	467.35
9	9.48	44.71	1019.12	66.43	478.42
10	14.64	45	1021.78	41.25	475.98
11	11.74	43.56	1015.14	70.72	477.5
12	17.99	43.72	1008.64	75.04	453.02
13	20.14	46.93	1014.66	64.22	453.99
14	24.34	73.5	1011.31	84.15	440.29
15	25.71	58.59	1012.77	61.83	451.28
16	26.19	69.34	1009.48	87.59	433.99
17	21.42	43.79	1015.76	43.08	462.19
18	18.21	45	1022.86	48.84	467.54
19	11.04	41.74	1022.6	77.51	477.2
20	14.45	52.75	1023.97	63.59	459.85
21	13.97	38.47	1015.15	55.28	464.3
22	17.76	42.42	1009.09	66.26	468.27
23	5.41	40.07	1019.16	64.77	495.24
24	7.76	42.28	1008.52	83.31	483.8
25	27.23	63.9	1014.3	47.19	443.61
26	27.36	48.6	1003.18	54.93	436.06
27	27.47	70.72	1009.97	74.62	443.25
28	14.6	39.31	1011.11	72.52	464.16
29	7.91	39.96	1023.57	88.44	475.52
30	5.81	35.79	1012.14	92.28	484.41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18_RegressionModelSelection.ipynb
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Importing the basic libraries
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
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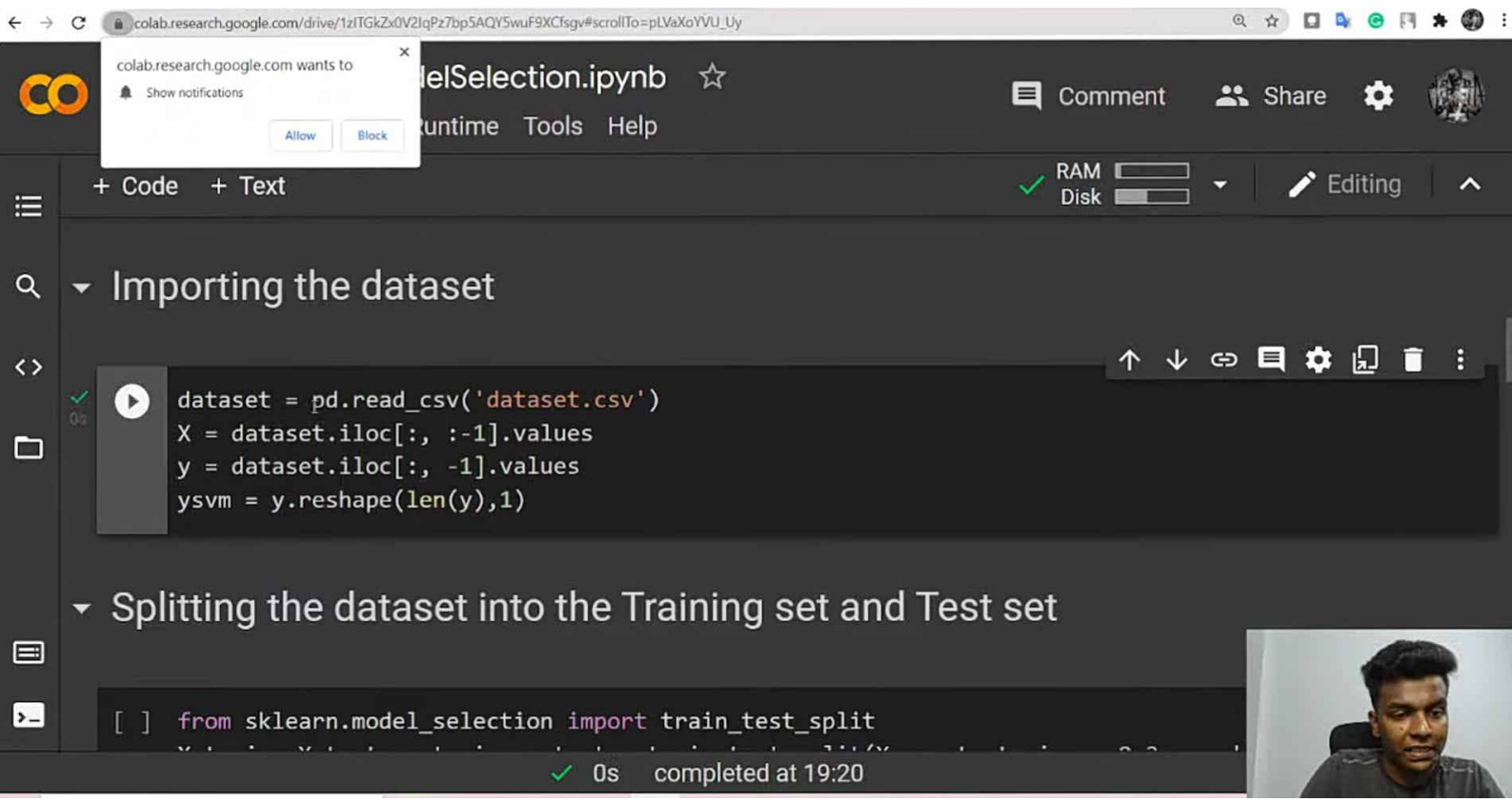
Load Dataset from Local Directory
[ ] from google.colab import files
uploaded = files.upload()
0s completed at 19:19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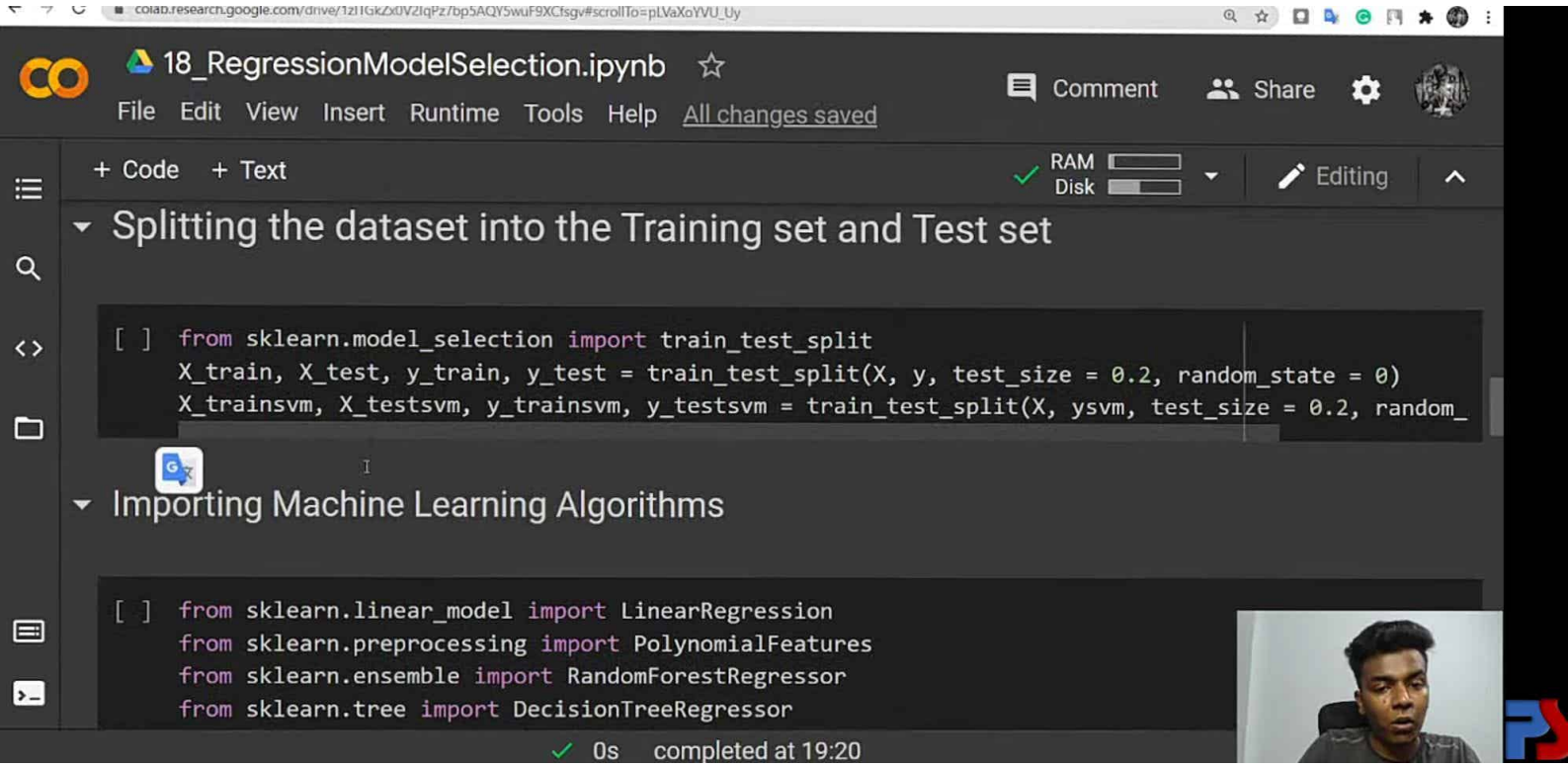
Importing the dataset
dataset = pd.read_csv('dataset.csv')
X = dataset.iloc[:, :-1].values
y = dataset.iloc[:, -1].values
ysvm = y.reshape(len(y),1)
Splitting the dataset into the Training set and Test set
[ ] from sklearn.model_selection import train_test_split
0s completed at 19:20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18_RegressionModelSelection.ipynb
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Editing
Splitting the dataset into the Training set and Test set
[ ] from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.2, random_state = 0)
X_trainsvm, X_testsvm, y_trainsvm, y_testsvm = train_test_split(X, ysvm, test_size = 0.2, random_
Importing Machine Learning Algorithms
[ ] from sklearn.linear_model import LinearRegression
from sklearn.preprocessing import PolynomialFeatures
from sklearn.ensemble import RandomForestRegressor
from sklearn.tree import DecisionTreeRegressor
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18_RegressionModelSelection.ipynb

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```
from sklearn.tree import DecisionTreeRegressor
from sklearn.svm import SVR
```

Initializing different Regression algorithms

```
from sklearn.preprocessing import StandardScaler

modelLR  = LinearRegression()

poly_reg = PolynomialFeatures(degree = 4)
X_poly   = poly_reg.fit_transform(X_train)
modelPLR = LinearRegression()
```

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18_RegressionModelSelection.ipynb

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```
modelRFR = RandomForestRegressor(n_estimators = 10, random_state = 0)

modelDTR = DecisionTreeRegressor(random_state = 0)

modelSVR = SVR(kernel = 'rbf')

sc_X     = StandardScaler()
sc_y     = StandardScaler()
X_trainsvm  = sc_X.fit_transform(X_trainsvm)
y_trainsvm  = sc_y.fit_transform(y_trainsvm)
```

Training Regression algorithm

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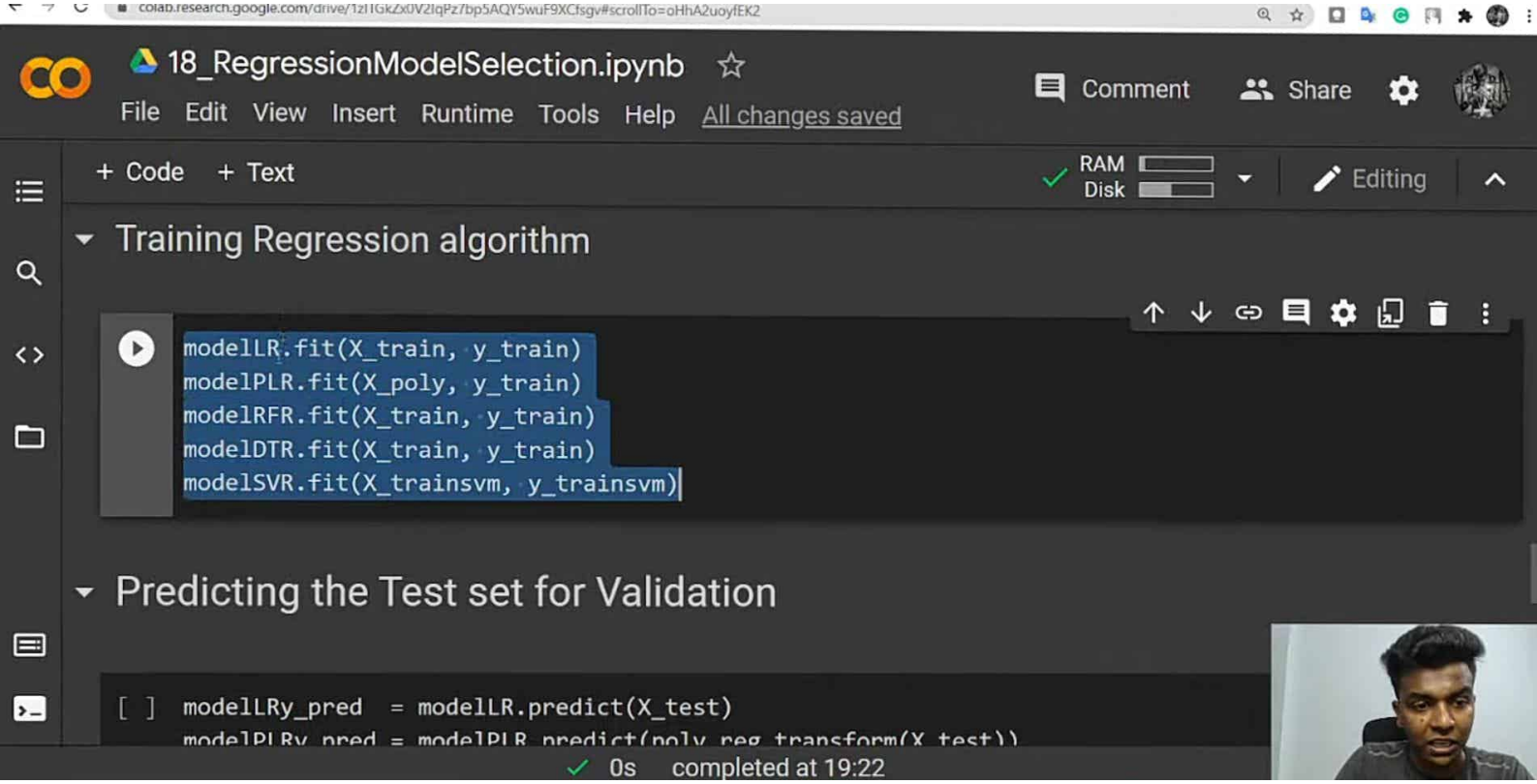
colab.research.google.com/drive/1zITGkZx0V2IqPz7bp5AQY5wuF9XCfsgv#scrollTo=oHhA2uoyfEK2
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Editing
Training Regression algorithm
modelLR.fit(X_train, y_train)
modelPLR.fit(X_poly, y_train)
modelRFR.fit(X_train, y_train)
modelDTR.fit(X_train, y_train)
modelSVR.fit(X_trainsvm, y_trainsvm)
Predicting the Test set for Validation
[ ] modelLRy_pred = modelLR.predict(X_test)
0s completed at 19:22

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18_RegressionModelSelection.ipynb

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```
modelPLRy_pred = modelPLR.predict(poly_reg.transform(X_test))
modelRFRy_pred = modelRFR.predict(X_test)
modelDTRy_pred = modelDTR.predict(X_test)
modelSVRy_pred = sc_y.inverse_transform(modelSVR.predict(sc_X.transform(X_test)))
```

Evaluating the Model Performance

```
from sklearn.metrics import r2_score
print("Linear Regression Accuracy: {}".format(r2_score(y_test, modelLRy_pred)))
print("Polynomial Regression Accuracy: {}".format(r2_score(y_test, modelPLRy_pred)))
print("Random Forest Regression Accuracy: {}".format(r2_score(y_test, modelRFRy_
print("Decision Treee Regression Accuracy: {}".format(r2_score(y_test, modelDTRy
print("Support Vector Regression Accuracy: {}".format(r2_score(y_test, modelSVRy
```

0s completed at 19:25