

# ML Task

## Output

The screenshot shows a Qt dialog box titled "Dialog" with a "Choose File" button. The main area contains a table with 13 columns: Time, radius, texture, perimeter, area, smoothness, compactness, concavity, 'concave', and symmetry. The table lists 13 rows of data. Below the table is a summary table with columns for the same features and a 'count' column. The summary table includes statistics like mean, std, min, and percentiles (25%, 50%, 75%, max). On the right side of the dialog, there are two sliders: "Test Size" with a value of 0.2 and "Alpha Size" with a value of 0.1. Below the sliders are three radio buttons: "MSE" (selected), "MAE", and "RMSE". There are also "Train" and "Test" buttons. The "Train" button has a value of 0.15518219984623244, and the "Test" button has a value of 0.10678150332506703.

	Time	radius	texture	perimeter	area	smoothness	compactness	concavity	'concave'	symmetry
0	31	18.02	27.60	117.50	1013.0	0.09489	0.10360	0.10860	0.07055	0.1865
1	61	17.99	10.38	122.80	1001.0	0.11840	0.27760	0.30010	0.14710	0.2419
2	116	21.37	17.44	137.50	1373.0	0.08836	0.11890	0.12550	0.08180	0.2333
3	123	11.42	20.38	77.58	386.1	0.14250	0.28390	0.24140	0.10520	0.2597
4	27	20.29	14.34	135.10	1297.0	0.10030	0.13280	0.19800	0.10430	0.1809
5	77	12.75	15.29	84.60	502.7	0.11890	0.15690	0.16640	0.07666	0.1995
6	77	13.71	20.83	90.20	577.9	0.11890	0.16450	0.09366	0.05985	0.2196
7	119	13.00	21.82	87.50	519.8	0.12730	0.19320	0.18590	0.09353	0.2350
8	76	12.46	24.04	83.97	475.9	0.11860	0.23960	0.22730	0.08543	0.2030
9	123	16.02	23.24	102.70	797.8	0.08206	0.06669	0.03299	0.03323	0.1528
10	125	15.78	17.89	103.60	781.0	0.09710	0.12920	0.09954	0.06606	0.1842
11	117	15.85	23.95	103.70	782.7	0.08401	0.10020	0.09938	0.05364	0.1847
12	36	14.54	27.54	96.73	658.8	0.11390	0.15950	0.16390	0.07364	0.2303
13	123	14.68	20.13	94.74	684.5	0.09867	0.07200	0.07395	0.05259	0.1586

	Time	radius	texture	perimeter	area	smoothness	compactness	concavity	'concave'	symmetry
count	194.000000	194.000000	194.000000	194.000000	194.000000	194.000000	194.000000	194.000000	194.000000	194.000000
mean	46.938144	17.402320	22.300979	114.781495	969.092268	0.102774	0.142642	0.156309	0.086808	0.192885
std	34.523646	3.171672	4.335292	21.430694	353.159959	0.012607	0.050229	0.070942	0.033962	0.027679
min	1.000000	10.950000	10.380000	71.900000	361.600000	0.074970	0.046050	0.023980	0.020310	0.130800
25%	14.250000	15.052500	19.342500	98.160000	702.525000	0.093900	0.109850	0.106075	0.063760	0.174075
50%	39.500000	17.290000	21.795000	113.700000	929.100000	0.102200	0.131750	0.152050	0.086075	0.189350
75%	73.000000	19.580000	24.782500	129.650000	1193.500000	0.111375	0.172200	0.200500	0.103925	0.209550
max	125.000000	27.220000	39.280000	182.100000	2250.000000	0.144700	0.311400	0.426800	0.201200	0.304000

## Design

```
# Form implementation generated from reading ui file 'DesignPage1.ui'
#
# Created by: PyQt6 UI code generator 6.5.0
#
# WARNING: Any manual changes made to this file will be lost when pyuic6 is
# run again. Do not edit this file unless you know what you are doing.

from PyQt6 import QtCore, QtGui, QtWidgets

class Ui_Dialog(object):
    def setupUi(self, Dialog):
        Dialog.setObjectName("Dialog")
        Dialog.resize(1204, 625)
        self.horizontalLayoutWidget = QtWidgets.QWidget(parent=Dialog)
        self.horizontalLayoutWidget.setGeometry(QtCore.QRect(10, 20, 112,
41))
        self.horizontalLayoutWidget.setObjectName("horizontalLayoutWidget")
        self.horizontalLayout =
```

```

QtWidgets.QHBoxLayout(self.horizontalLayoutWidget)
    self.horizontalLayout.setContentsMargins(0, 0, 0, 0)
    self.horizontalLayout.setObjectName("horizontalLayout")
    self.UploadFile =
QtWidgets.QPushButton(parent=self.horizontalLayoutWidget)
    self.UploadFile.setEnabled(True)
    sizePolicy =
QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Fixed,
QtWidgets.QSizePolicy.Policy.Fixed)
    sizePolicy.setHorizontalStretch(0)
    sizePolicy.setVerticalStretch(0)

sizePolicy.setHeightForWidth(self.UploadFile.sizePolicy().hasHeightForWidth()
)
    self.UploadFile.setSizePolicy(sizePolicy)
    font = QtGui.QFont()
    font.setPointSize(12)
    self.UploadFile.setFont(font)
    self.UploadFile.setAutoFillBackground(False)
    icon = QtGui.QIcon()
    icon.addPixmap(QtGui.QPixmap("upload.png"), QtGui.QIcon.Mode.Normal,
QtGui.QIcon.State.Off)
    self.UploadFile.setIcon(icon)
    self.UploadFile.setObjectName("UploadFile")
    self.horizontalLayout.addWidget(self.UploadFile)
    self.gridLayoutWidget = QtWidgets.QWidget(parent=Dialog)
    self.gridLayoutWidget.setGeometry(QtCore.QRect(9, 70, 731, 241))
    self.gridLayoutWidget.setObjectName("gridLayoutWidget")
    self.gridLayout = QtWidgets.QGridLayout(self.gridLayoutWidget)
    self.gridLayout.setContentsMargins(0, 0, 0, 0)
    self.gridLayout.setObjectName("gridLayout")
    self.showData = QtWidgets.QScrollArea(parent=self.gridLayoutWidget)
    self.showData.setWidgetResizable(True)
    self.showData.setObjectName("showData")
    self.scrollAreaWidgetContents = QtWidgets.QWidget()
    self.scrollAreaWidgetContents.setGeometry(QtCore.QRect(0, 0, 727,
237))

self.scrollAreaWidgetContents.setObjectName("scrollAreaWidgetContents")
    self.ShowData =
QtWidgets.QTextBrowser(parent=self.scrollAreaWidgetContents)
    self.ShowData.setEnabled(False)
    self.ShowData.setGeometry(QtCore.QRect(0, 0, 731, 241))
    self.ShowData.setObjectName("ShowData")
    self.showData.setWidget(self.scrollAreaWidgetContents)
    self.gridLayout.addWidget(self.showData, 0, 0, 1, 1)
    self.gridLayoutWidget_2 = QtWidgets.QWidget(parent=Dialog)
    self.gridLayoutWidget_2.setGeometry(QtCore.QRect(10, 350, 731, 241))
    self.gridLayoutWidget_2.setObjectName("gridLayoutWidget_2")
    self.gridLayout_2 = QtWidgets.QGridLayout(self.gridLayoutWidget_2)
    self.gridLayout_2.setContentsMargins(0, 0, 0, 0)
    self.gridLayout_2.setObjectName("gridLayout_2")
    self.desc_data =
QtWidgets.QScrollArea(parent=self.gridLayoutWidget_2)
    self.desc_data.setWidgetResizable(True)
    self.desc_data.setObjectName("desc_data")
    self.scrollAreaWidgetContents_2 = QtWidgets.QWidget()

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        self.scrollAreaWidgetContents_2.setGeometry(QtCore.QRect(0, 0, 727,
237))

self.scrollAreaWidgetContents_2.setObjectName("scrollAreaWidgetContents_2")
    self.Datadesc =
QtWidgets.QTextBrowser(parent=self.scrollAreaWidgetContents_2)
    self.Datadesc.setEnabled(True)
    self.Datadesc.setGeometry(QtCore.QRect(0, 0, 731, 241))
    self.Datadesc.setAccessibleDescription("")
    self.Datadesc.setObjectName("Datadesc")
    self.desc_data.addWidget(self.scrollAreaWidgetContents_2)
    self.gridLayout_2.addWidget(self.desc_data, 0, 0, 1, 1)
    self.horizontalLayoutWidget_2 = QtWidgets.QWidget(parent=Dialog)
    self.horizontalLayoutWidget_2.setGeometry(QtCore.QRect(930, 70, 258,
31))

self.horizontalLayoutWidget_2.setObjectName("horizontalLayoutWidget_2")
    self.horizontalLayout_2 =
QtWidgets.QHBoxLayout(self.horizontalLayoutWidget_2)
    self.horizontalLayout_2.setContentsMargins(0, 0, 0, 0)
    self.horizontalLayout_2.setObjectName("horizontalLayout_2")
    self.Test_Size =
QtWidgets.QSlider(parent=self.horizontalLayoutWidget_2)
    self.Test_Size.setEnabled(False)
    self.Test_Size.setOrientation(QtCore.Qt.Orientation.Horizontal)
    self.Test_Size.setObjectName("Test_Size")
    self.horizontalLayout_2.addWidget(self.Test_Size)
    self.horizontalLayoutWidget_3 = QtWidgets.QWidget(parent=Dialog)
    self.horizontalLayoutWidget_3.setGeometry(QtCore.QRect(750, 70, 151,
35))

self.horizontalLayoutWidget_3.setObjectName("horizontalLayoutWidget_3")
    self.horizontalLayout_3 =
QtWidgets.QHBoxLayout(self.horizontalLayoutWidget_3)
    self.horizontalLayout_3.setContentsMargins(0, 0, 0, 0)
    self.horizontalLayout_3.setObjectName("horizontalLayout_3")
    self.label = QtWidgets.QLabel(parent=self.horizontalLayoutWidget_3)
    font = QtGui.QFont()
    font.setPointSize(14)
    self.label.setFont(font)
    self.label.setScaledContents(False)
    self.label.setObjectName("label")
    self.horizontalLayout_3.addWidget(self.label)
    self.horizontalLayoutWidget_4 = QtWidgets.QWidget(parent=Dialog)
    self.horizontalLayoutWidget_4.setGeometry(QtCore.QRect(750, 180, 131,
31))

self.horizontalLayoutWidget_4.setObjectName("horizontalLayoutWidget_4")
    self.horizontalLayout_5 =
QtWidgets.QHBoxLayout(self.horizontalLayoutWidget_4)
    self.horizontalLayout_5.setContentsMargins(0, 0, 0, 0)
    self.horizontalLayout_5.setObjectName("horizontalLayout_5")
    self.label_3 = QtWidgets.QLabel(parent=self.horizontalLayoutWidget_4)
    font = QtGui.QFont()
    font.setPointSize(14)
    self.label_3.setFont(font)
    self.label_3.setObjectName("label_3")

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        self.horizontalLayout_5.addWidget(self.label_3)
        self.horizontalLayoutWidget_5 = QtWidgets.QWidget(parent=Dialog)
        self.horizontalLayoutWidget_5.setGeometry(QtCore.QRect(927, 180, 251,
31))

self.horizontalLayoutWidget_5.setObjectName("horizontalLayoutWidget_5")
    self.horizontalLayout_6 =
QtWidgets.QHBoxLayout(self.horizontalLayoutWidget_5)
    self.horizontalLayout_6.setContentsMargins(0, 0, 0, 0)
    self.horizontalLayout_6.setObjectName("horizontalLayout_6")
    self.Alpha_Size =
QtWidgets.QSlider(parent=self.horizontalLayoutWidget_5)
    self.Alpha_Size.setEnabled(False)
    self.Alpha_Size.setOrientation(QtCore.Qt.Orientation.Horizontal)
    self.Alpha_Size.setObjectName("Alpha_Size")
    self.horizontalLayout_6.addWidget(self.Alpha_Size)
    self.groupBox = QtWidgets.QGroupBox(parent=Dialog)
    self.groupBox.setEnabled(True)
    self.groupBox.setGeometry(QtCore.QRect(760, 230, 111, 151))
    self.groupBox.setTitle("")
    self.groupBox.setObjectName("groupBox")
    self.MSE = QtWidgets.QRadioButton(parent=self.groupBox)
    self.MSE.setEnabled(False)
    self.MSE.setGeometry(QtCore.QRect(10, 30, 95, 20))
    font = QtGui.QFont()
    font.setPointSize(12)
    font.setBold(False)
    self.MSE.setFont(font)
    self.MSE.setObjectName("MSE")
    self.MAE = QtWidgets.QRadioButton(parent=self.groupBox)
    self.MAE.setEnabled(False)
    self.MAE.setGeometry(QtCore.QRect(10, 70, 95, 20))
    font = QtGui.QFont()
    font.setPointSize(12)
    font.setBold(False)
    self.MAE.setFont(font)
    self.MAE.setObjectName("MAE")
    self.RMSE = QtWidgets.QRadioButton(parent=self.groupBox)
    self.RMSE.setEnabled(False)
    self.RMSE.setGeometry(QtCore.QRect(10, 120, 95, 20))
    font = QtGui.QFont()
    font.setPointSize(12)
    font.setBold(False)
    self.RMSE.setFont(font)
    self.RMSE.setObjectName("RMSE")
    self.horizontalLayoutWidget_6 = QtWidgets.QWidget(parent=Dialog)
    self.horizontalLayoutWidget_6.setGeometry(QtCore.QRect(780, 400, 101,
41))

self.horizontalLayoutWidget_6.setObjectName("horizontalLayoutWidget_6")
    self.horizontalLayout_7 =
QtWidgets.QHBoxLayout(self.horizontalLayoutWidget_6)
    self.horizontalLayout_7.setContentsMargins(0, 0, 0, 0)
    self.horizontalLayout_7.setObjectName("horizontalLayout_7")
    self.train =
QtWidgets.QPushButton(parent=self.horizontalLayoutWidget_6)
    self.train.setEnabled(False)

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        sizePolicy =
QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Fixed,
QtWidgets.QSizePolicy.Policy.Fixed)
        sizePolicy.setHorizontalStretch(0)
        sizePolicy.setVerticalStretch(0)

sizePolicy.setHeightForWidth(self.train.sizePolicy().hasHeightForWidth())
        self.train.setSizePolicy(sizePolicy)
        font = QtGui.QFont()
        font.setPointSize(12)
        self.train.setFont(font)
        self.train.setObjectName("train")
        self.horizontalLayout_7.addWidget(self.train)
        self.horizontalLayoutWidget_7 = QtWidgets.QWidget(parent=Dialog)
        self.horizontalLayoutWidget_7.setGeometry(QtCore.QRect(780, 500, 101,
41))

self.horizontalLayoutWidget_7.setObjectName("horizontalLayoutWidget_7")
        self.horizontalLayout_8 =
QtWidgets.QHBoxLayout(self.horizontalLayoutWidget_7)
        self.horizontalLayout_8.setContentsMargins(0, 0, 0, 0)
        self.horizontalLayout_8.setObjectName("horizontalLayout_8")
        self.test =
QtWidgets.QPushButton(parent=self.horizontalLayoutWidget_7)
        self.test.setEnabled(False)
        sizePolicy =
QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Fixed,
QtWidgets.QSizePolicy.Policy.Fixed)
        sizePolicy.setHorizontalStretch(0)
        sizePolicy.setVerticalStretch(0)

sizePolicy.setHeightForWidth(self.test.sizePolicy().hasHeightForWidth())
        self.test.setSizePolicy(sizePolicy)
        font = QtGui.QFont()
        font.setPointSize(12)
        self.test.setFont(font)
        self.test.setObjectName("test")
        self.horizontalLayout_8.addWidget(self.test)
        self.horizontalLayoutWidget_8 = QtWidgets.QWidget(parent=Dialog)
        self.horizontalLayoutWidget_8.setGeometry(QtCore.QRect(920, 400, 258,
31))

self.horizontalLayoutWidget_8.setObjectName("horizontalLayoutWidget_8")
        self.horizontalLayout_9 =
QtWidgets.QHBoxLayout(self.horizontalLayoutWidget_8)
        self.horizontalLayout_9.setContentsMargins(0, 0, 0, 0)
        self.horizontalLayout_9.setObjectName("horizontalLayout_9")
        self.train_error =
QtWidgets.QPlainTextEdit(parent=self.horizontalLayoutWidget_8)
        self.train_error.setEnabled(False)
        sizePolicy =
QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Fixed)
        sizePolicy.setHorizontalStretch(0)
        sizePolicy.setVerticalStretch(0)

sizePolicy.setHeightForWidth(self.train_error.sizePolicy().hasHeightForWidth(

```

```

))
    self.train_error.setSizePolicy(sizePolicy)
    self.train_error.setAccessibleDescription("")
    self.train_error.setUndoRedoEnabled(False)
    self.train_error.setObjectName("train_error")
    self.horizontalLayout_9.addWidget(self.train_error)
    self.horizontalLayoutWidget_9 = QtWidgets.QWidget(parent=Dialog)
    self.horizontalLayoutWidget_9.setGeometry(QtCore.QRect(920, 500, 258,
31))

self.horizontalLayoutWidget_9.setObjectName("horizontalLayoutWidget_9")
    self.horizontalLayout_10 =
QtWidgets.QHBoxLayout(self.horizontalLayoutWidget_9)
    self.horizontalLayout_10.setContentsMargins(0, 0, 0, 0)
    self.horizontalLayout_10.setObjectName("horizontalLayout_10")
    self.test_error =
QtWidgets.QPlainTextEdit(parent=self.horizontalLayoutWidget_9)
    self.test_error.setEnabled(False)
    self.test_error.setSizePolicy =
QtWidgets.QSizePolicy(QtWidgets.QSizePolicy.Policy.Minimum,
QtWidgets.QSizePolicy.Policy.Fixed)
    self.test_error.setSizePolicy.setHorizontalStretch(0)
    self.test_error.setSizePolicy.setVerticalStretch(0)

self.test_error.setSizePolicy.setHeightForWidth(self.test_error.sizePolicy().hasHeightForWidth()
)

    self.test_error.setSizePolicy(sizePolicy)
    self.test_error.setUndoRedoEnabled(False)
    self.test_error.setObjectName("test_error")
    self.horizontalLayout_10.addWidget(self.test_error)
    self.gridLayoutWidget_3 = QtWidgets.QWidget(parent=Dialog)
    self.gridLayoutWidget_3.setGeometry(QtCore.QRect(1010, 110, 131, 31))
    self.gridLayoutWidget_3.setObjectName("gridLayoutWidget_3")
    self.gridLayout_3 = QtWidgets.QGridLayout(self.gridLayoutWidget_3)
    self.gridLayout_3.setContentsMargins(0, 0, 0, 0)
    self.gridLayout_3.setObjectName("gridLayout_3")
    self.Test_Volume = QtWidgets.QLabel(parent=self.gridLayoutWidget_3)
    font = QtGui.QFont()
    font.setPointSize(11)
    self.Test_Volume.setFont(font)
    self.Test_Volume.setObjectName("Test_Volume")
    self.gridLayout_3.addWidget(self.Test_Volume, 0, 0, 1, 1)
    self.gridLayoutWidget_4 = QtWidgets.QWidget(parent=Dialog)
    self.gridLayoutWidget_4.setGeometry(QtCore.QRect(1000, 220, 141, 31))
    self.gridLayoutWidget_4.setObjectName("gridLayoutWidget_4")
    self.gridLayout_4 = QtWidgets.QGridLayout(self.gridLayoutWidget_4)
    self.gridLayout_4.setContentsMargins(0, 0, 0, 0)
    self.gridLayout_4.setObjectName("gridLayout_4")
    self.Alpha_Volume = QtWidgets.QLabel(parent=self.gridLayoutWidget_4)
    font = QtGui.QFont()
    font.setPointSize(11)
    self.Alpha_Volume.setFont(font)
    self.Alpha_Volume.setObjectName("Alpha_Volume")
    self.gridLayout_4.addWidget(self.Alpha_Volume, 0, 0, 1, 1)

    self.retranslateUi(Dialog)
    QtCore.QMetaObject.connectSlotsByName(Dialog)

```

```

def retranslateUi(self, Dialog):
    _translate = QtCore.QCoreApplication.translate
    Dialog.setWindowTitle(_translate("Dialog", "Dialog"))
    self.UploadFile.setText(_translate("Dialog", "Choose File"))
    self.label.setText(_translate("Dialog", "Test Size"))
    self.label_3.setText(_translate("Dialog", "Alpha Size"))
    self.MSE.setText(_translate("Dialog", "MSE"))
    self.MAE.setText(_translate("Dialog", "MAE"))
    self.RMSE.setText(_translate("Dialog", "RMSE"))
    self.train.setText(_translate("Dialog", "Train"))
    self.test.setText(_translate("Dialog", "Test"))
    self.Test_Volume.setText(_translate("Dialog", "Value: 0"))
    self.Alpha_Volume.setText(_translate("Dialog", "Value: 0"))

if __name__ == "__main__":
    import sys
    app = QtWidgets.QApplication(sys.argv)
    Dialog = QtWidgets.QDialog()
    ui = Ui_Dialog()
    ui.setupUi(Dialog)
    Dialog.show()
    sys.exit(app.exec())

```

## Code

```

import pandas as pd
import numpy as np
import sys
import tkinter as tk
from PyQt6.QtWidgets import QApplication, QWidget, QSlider
from tkinter import filedialog
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression, Lasso
from sklearn import metrics
from Design import Ui_Dialog
class Window(QWidget):
    def __init__(self):
        super().__init__()
        self.df = None
        self.ui = Ui_Dialog()
        self.ui.setupUi(self)
        self.ui.UploadFile.clicked.connect(self.buttonClick)
        self.ui.Test_Size.setTickPosition(QSlider.TickPosition.TicksBelow)
        self.ui.Test_Size.setTickInterval(1)
        self.ui.Test_Size.valueChanged.connect(self.tsize)
        self.ui.Alpha_Size.setTickPosition(QSlider.TickPosition.TicksBelow)
        self.ui.Alpha_Size.setTickInterval(1)
        self.ui.Alpha_Size.valueChanged.connect(self.Asize)
        self.ui.MAE.clicked.connect(self.showtrain)

```

```

self.ui.MSE.clicked.connect(self.showtrain)
self.ui.RMSE.clicked.connect(self.showtrain)
self.ui.train.clicked.connect(self.TRAIN)
self.ui.test.clicked.connect(self.TEST)
def buttonClick(self):
file_path = filedialog.askopenfilename(filetypes=[("CSV Files",
"*.csv")])
self.df = pd.read_csv(file_path)
self.x = self.df.iloc[:, :-1].values
self.y = self.df.iloc[:, 1].values
self.ui.ShowData.setEnabled(True)
self.ui.ShowData.setText(self.df.to_string())
report = self.df.describe()
print(report)
self.ui.Datadesc.setText(report.to_string())
self.ui.Test_Size.setEnabled(True)
def TRAIN(self):
self.ui.train_error.setPlainText(str(self.error_train))
self.ui.test.setEnabled(True)
def TEST(self):
# self.ui.train_t.setPlainText(str(self.error_train))
self.ui.test_error.setPlainText(str(self.error_test))
self.ui.test.setEnabled(True)
# self.ui.train_error.setPlainText("assd")
def showtrain(self):
self.ui.train.setEnabled(True)
self.lasso = Lasso(alpha=self.alpha)
self.lasso.fit(self.X_train, self.y_train)
self.y_pred = self.lasso.predict(self.X_test)
self.train_pred = self.lasso.predict(self.X_train)
if self.ui.MAE.isChecked():
self.error_train =
metrics.mean_absolute_error(self.y_train, self.train_pred)
self.error_test =
metrics.mean_absolute_error(self.y_test, self.y_pred)
elif self.ui.MSE:
self.error_train =
metrics.mean_squared_error(self.y_train, self.train_pred)
self.error_test =
metrics.mean_squared_error(self.y_test, self.y_pred)
elif self.ui.RMSE:
self.error_train =
np.sqrt(metrics.mean_squared_error(self.y_train, self.train_pred))
self.error_test =
np.sqrt(metrics.mean_squared_error(self.y_test, self.y_pred))
def showtest(self):
self.ui.test.setEnabled(True)
print(self.x)
print(self.y)
print(self.test_size)
def tsize(self):
self.test_size=self.sender().value()/100
# self.y_test = train_test_split(self.x, self.y,
test_size=self.test_size, random_state=0)
self.ui.Test_Volume.setText("Value: "+str(self.test_size))
self.ui.Test_Volume.adjustSize() # Expands label size as numbers get
larger

```



```
        self.ui.Alpha_Size.setEnabled(True)
    def Asize(self):
        self.alpha = self.sender().value()
        self.ui.Alpha_Volume.setText("Value: " +str(self.alpha/100))
        self.ui.Alpha_Volume.adjustSize() # Expands label size as numbers
get larger
        self.ui.MSE.setEnabled(True)
        self.ui.MAE.setEnabled(True)
        self.ui.RMSE.setEnabled(True)
        self.X_train, self.X_test, self.y_train, self.y_test =
train_test_split(self.x, self.y, test_size=self.test_size, random_state=0)
        self.regressor = LinearRegression()
        self.regressor.fit(self.X_train, self.y_train)
        self.y_pred = self.regressor.predict(self.X_test)
app = QApplication(sys.argv)
window = Window()
window.show()
sys.exit(app.exec())
```