

The screenshot displays the Spyder Python IDE interface. The main window is divided into several panes:

- Code Editor:** Contains Python code for a class named `Assignment2`. The code includes imports for `sklearn`, `pandas`, `numpy`, and `matplotlib`, and defines a `readData` static method to load data from CSV or XLSX files. The `__init__` method uses `readData` to load the dataset and create a `DataFrame`.
- Variable Explorer:** Shows the current scope of variables, including `DataSet_name`, `Sheet_Name`, `ColNames`, and `Extension`.
- Plots:** Displays a line plot titled "Learning Curve" showing the training and testing accuracy of a model. The x-axis is labeled "portion of the training set" and ranges from 0 to 100. The y-axis ranges from 78 to 80. The training accuracy (green line) is consistently higher than the testing accuracy (purple line).
- Console:** Shows the output of the code execution, including the results of the `readData` method and the `__init__` method.

Red arrows highlight the "Variable explorer" and "Plots" tabs in the top right pane, and the "Console" tab in the bottom left pane.

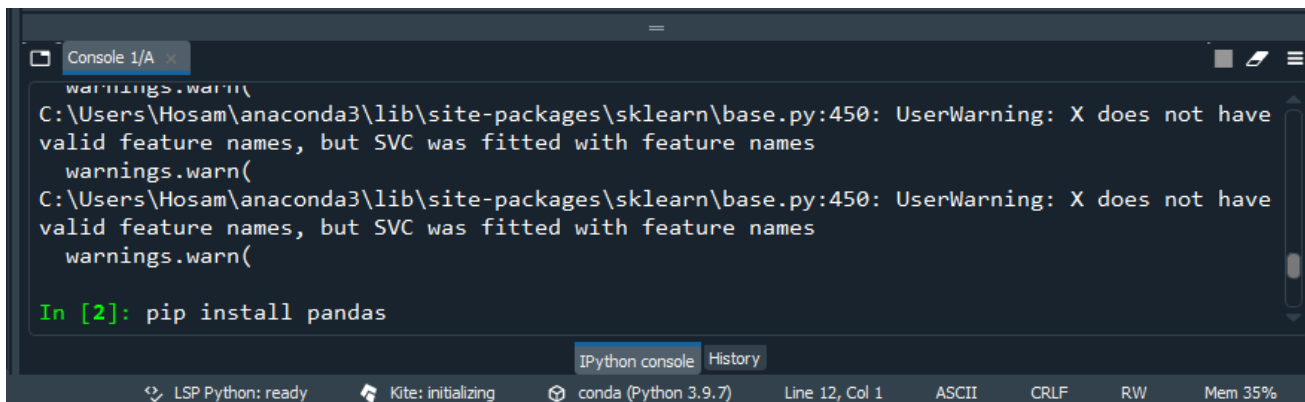
```
from sklearn.datasets import load_wine  
import pandas as pd, numpy as np  
from sklearn.preprocessing import StandardScaler  
from sklearn.model_selection import train_test_split  
from sklearn.naive_bayes import GaussianNB
```

```
from sklearn.metrics import confusion_matrix  
import seaborn as sns , re  
import matplotlib.pyplot as plt  
from sklearn.metrics import accuracy_score  
from matplotlib.colors import ListedColormap  
from sklearn.metrics import classification_report  
from sklearn.ensemble import ExtraTreesClassifier  
from sklearn.neighbors import KNeighborsClassifier  
import time
```

To install the missing libraries, you have to write something like this ->

```
>>> pip install pandas
```

In Spyder console.

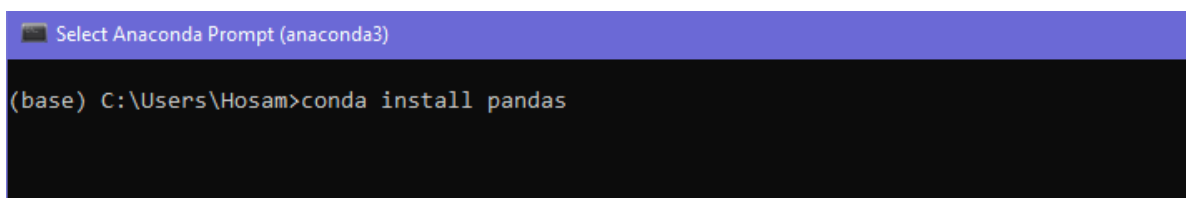
A screenshot of the Spyder console window. The console shows a warning message from sklearn: "UserWarning: X does not have valid feature names, but SVC was fitted with feature names". Below the warning, the command "In [2]: pip install pandas" is entered. The console window has a dark theme and a status bar at the bottom showing "LSP Python: ready", "Kite: initializing", "conda (Python 3.9.7)", "Line 12, Col 1", "ASCII", "CRLF", "RW", and "Mem 35%".

```
warnings.warn(  
C:\Users\Hosam\anaconda3\lib\site-packages\sklearn\base.py:450: UserWarning: X does not have  
valid feature names, but SVC was fitted with feature names  
warnings.warn(  
C:\Users\Hosam\anaconda3\lib\site-packages\sklearn\base.py:450: UserWarning: X does not have  
valid feature names, but SVC was fitted with feature names  
warnings.warn(  
  
In [2]: pip install pandas
```

or

```
>>> conda install pandas
```

In Anaconda prompt.

A screenshot of the Anaconda Prompt window. The window title is "Select Anaconda Prompt (anaconda3)". The command prompt shows "(base) C:\Users\Hosam>conda install pandas".

```
Select Anaconda Prompt (anaconda3)  
  
(base) C:\Users\Hosam>conda install pandas
```

List of required libraries:

pip install pandas

pip install numpy

pip install seaborn

pip install -U scikit-learn

pip install -U matplotlib

pip install python-time

Or

Conda install pandas

And so on...