

# Project prerequisites

- Anaconda
- Spyder

- Install Anaconda
- Create a new environment with python 3.5 as tensorflow is having some problem with python 3.6 and 3.7

# Environment creation

The screenshot displays the Anaconda Navigator application window. The top bar shows the system tray with icons for Windows, Firefox, and other applications, along with the time 7:50 PM and date 30-Apr-19. The Anaconda Navigator logo is visible in the top left corner, and a green 'Upgrade Now' button is in the top right corner.

The main interface is divided into a sidebar on the left and a main content area. The sidebar contains links to Home, Environments, Learning, and Community. The main content area shows a list of installed environments under the 'base (root)' tab. A 'Create new environment' dialog box is open, prompting the user to enter a name, location, and select packages (Python 3.5 and R are shown).

The 'Create new environment' dialog box has the following fields and options:

- Name:
- Location:
- Packages: ☒ Python 3.5 ☐ R mro

The main content area displays a table of installed environments with columns for Name, Description, and Version. The table lists various packages and their versions, such as \_ipyw\_lab\_nb\_ex..., \_tflow\_1100\_select, \_tflow\_select, abseil-py, alabaster, anaconda-client, anaconda-project, ast1crypto, astor, astroid, astropy, attrs, audioread, babel, backcall, backports, backports.shutil\_g..., beautifulsoup4, and hikarai.

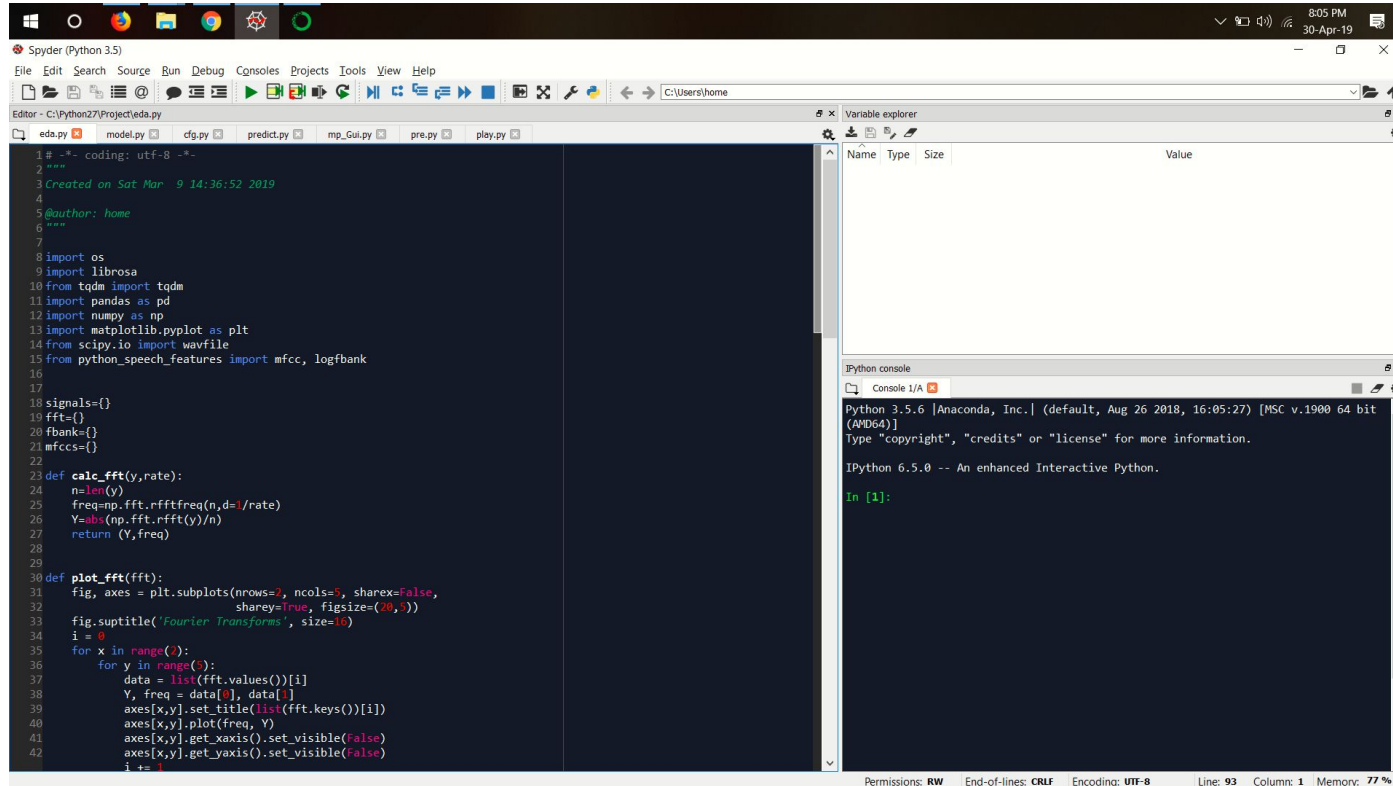
At the bottom of the main content area, it states '276 packages available'.

- Open terminal
- Trace through the path for required installations(for me it's in D drive)  
D:\Anaconda\envs\Project\Scripts
- Enter the installation commands as follows next

# Required installations

- `pip install numpy`
- `pip install pandas`
- `pip install tensorflow`
- `pip install keras`
- `pip install librosa`
- `pip install matplotlib`
- `pip install python_speech_features`
- `pip install scikit-learn`
- `pip install tqdm`
- `pip install tkinter`
- `pip install winsound`

- Now open spyder(Name)
- Open and run the required files as shown below



The screenshot displays the Spyder Python IDE interface. The main editor window shows a Python script with the following code:

```
1 # -*- coding: utf-8 -*-
2 """
3 Created on Sat Mar  9 14:36:52 2019
4
5 @author: home
6 """
7
8 import os
9 import librosa
10 from tqdm import tqdm
11 import pandas as pd
12 import numpy as np
13 import matplotlib.pyplot as plt
14 from scipy.io import wavfile
15 from python_speech_features import mfcc, logfbank
16
17
18 signals={}
19 fft={}
20 fbank={}
21 mfccs={}
22
23 def calc_fft(y,rate):
24     n=len(y)
25     freq=np.fft.rfftfreq(n,d=1/rate)
26     Y=abs(np.fft.rfft(y)/n)
27     return (Y,freq)
28
29
30 def plot_fft(fft):
31     fig, axes = plt.subplots(nrows=2, ncols=5, sharex=False,
32                             sharey=True, figsize=(20,8))
33     fig.suptitle('Fourier Transforms', size=10)
34     i = 0
35     for x in range(2):
36         for y in range(3):
37             data = list(fft.values())[i]
38             Y, freq = data[0], data[1]
39             axes[x,y].set_title(list(fft.keys())[i])
40             axes[x,y].plot(freq, Y)
41             axes[x,y].get_xaxis().set_visible(False)
42             axes[x,y].get_yaxis().set_visible(False)
43             i += 1
```

The variable explorer on the right shows a table with columns Name, Type, Size, and Value, which is currently empty.

The Python console at the bottom shows the IPython prompt and the command `In [1]:`.

At the bottom of the window, the status bar displays: Permissions: RW, End-of-lines: CRLF, Encoding: UTF-8, Line: 93, Column: 1, Memory: 77 %.

★ Place appropriate location

- eda.py will pre process the data
- model.py will create a model and saves it
- predict.py will do the classification and save them in prediction.csv file
- mp\_Gui.py is the GUI file which actually gives out the output