

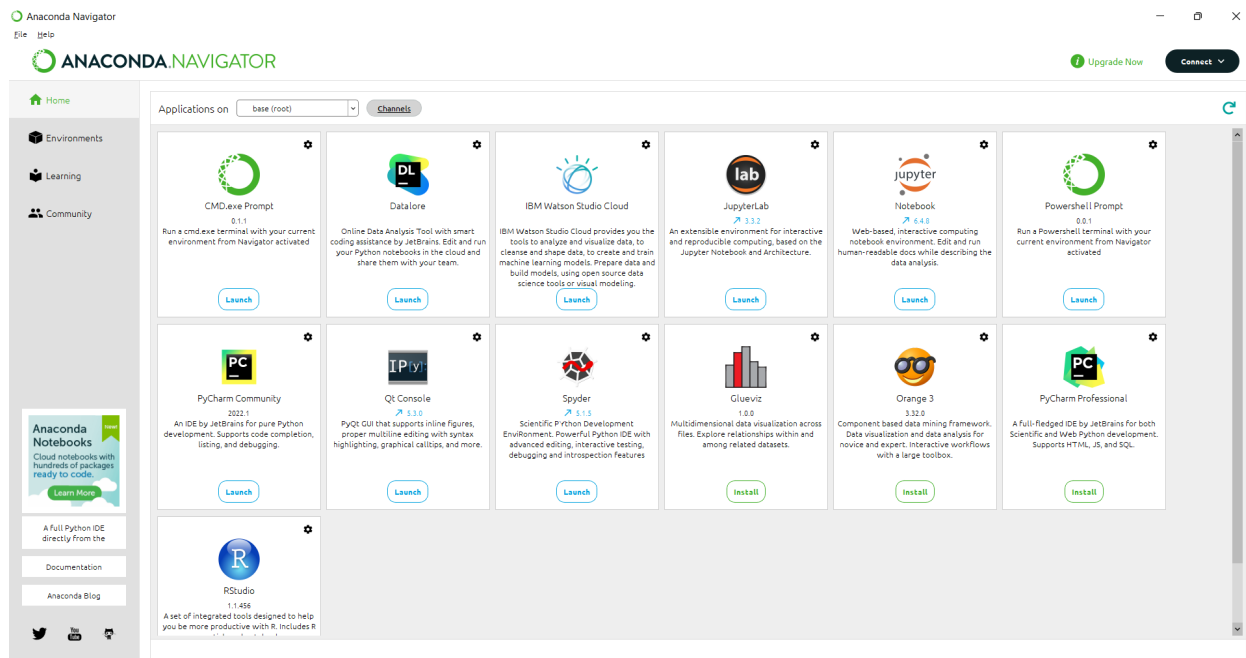
Prerequisites

To complete this project you should have the following software and packages

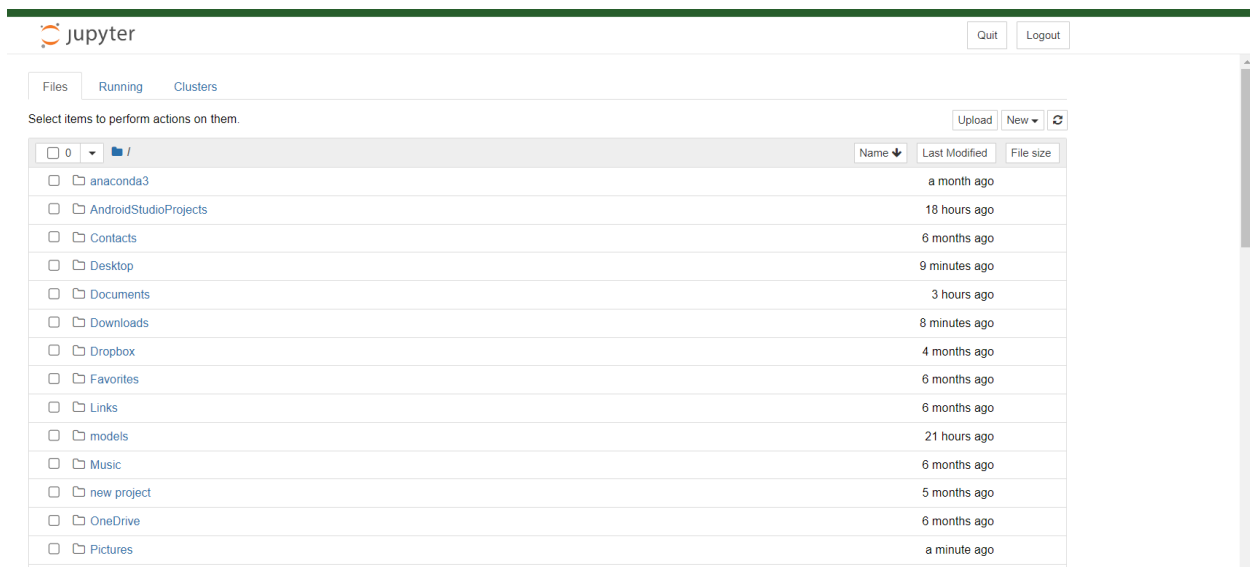
Anaconda Navigator :

Anaconda Navigator is a free and open-source distribution of the Python and R programming languages for data science and machine learning related applications. It can be installed on Windows, Linux, and macOS. Con da is an open-source, cross-platform, package management system. Anaconda comes with so very nice tools like JupyterLab, Jupyter Notebook, QtConsole, Spy der, Glue viz, Orange, Rstudio, Visual Studio Code. For this project, we will be using Jupiter notebook and spy der

To install Anaconda navigator and to know how to use Jupyter Notebook a Spy der using Anaconda



JUPYTER NOTEBOOK



To build Deep learning models you must require the following packages


Tensor flow: TensorFlow is an end-to-end open-source platform for machine learning. It has a comprehensive, flexible ecosystem of tools, libraries, and community resources that lets researchers push the state-of-the-art in ML and developers can easily build and deploy ML powered applications.

Keras : Keras leverages various optimization techniques to make high level neural network API easier and more performant. It supports the following features:

- Consistent, simple and extensible API.
- Minimal structure - easy to achieve the result without any frills.
- It supports multiple platforms and backend s.
- It is user friendly framework which runs on both CPU and GPU.
- Highly scalability of computation.


Flask: Web frame work used for building Web application.It's a Python module that lets you develop web applications easily. It's has a small and easy-to-extend core: it's a micro framework that doesn't include an ORM (Object Relational Manager) or such features.

INSTALL KERAS AND TENSORFLOW

 jupyter

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TrustedPython 3 (ipykernel)

         Code

In [1]: pip install keras

Requirement already satisfied: keras in c:\users\tamil\anaconda3\lib\site-packages (2.10.0)
Note: you may need to restart the kernel to use updated packages.

In [2]: pip install tensorflow

Requirement already satisfied: tensorflow in c:\users\tamil\anaconda3\lib\site-packages (2.10.0)
Requirement already satisfied: h5py>=2.9.0 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (3.6.0)
Requirement already satisfied: astunparse>=1.6.0 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (1.6.3)
Requirement already satisfied: flatbuffers>=2.0 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (22.10.26)
Requirement already satisfied: google-pasta>=0.1.1 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (0.2.0)
Requirement already satisfied: tensorflow-io-gcs-filesystem>=0.23.1 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (0.27.0)
Requirement already satisfied: absl-py>=1.0.0 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (1.3.0)
Requirement already satisfied: grpcio<2.0,>=1.24.3 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (1.42.0)
Requirement already satisfied: gast<=0.4.0,>=0.2.1 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (0.4.0)
Requirement already satisfied: keras<2.11,>=2.10.0 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (2.10.0)
Requirement already satisfied: tensorflow-estimator<2.11,>=2.10.0 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (2.10.0)
Requirement already satisfied: keras-preprocessing>=1.1.1 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (1.1.2)
Requirement already satisfied: six>=1.12.0 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (1.16.0)
Requirement already satisfied: typing-extensions>=3.6.6 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (4.1.1)
Requirement already satisfied: setuptools in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (61.2.0)
Requirement already satisfied: opt-einsum>=2.3.2 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (3.3.0)
Requirement already satisfied: termcolor>=1.1.0 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (2.1.0)
Requirement already satisfied: wrapt>=1.11.0 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (1.12.1)
Requirement already satisfied: protobuf<3.20,>=3.9.2 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (3.19.1)
Requirement already satisfied: tensorboard<2.11,>=2.10 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (2.10.1)
Requirement already satisfied: libclang>=13.0.0 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (14.0.6)
Requirement already satisfied: packaging in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (21.3)
Requirement already satisfied: numpy>=1.20 in c:\users\tamil\anaconda3\lib\site-packages (from tensorflow) (1.21.5)