**Pre-Requisites**

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

* **Anaconda Navigator**
* **Tensor flow**
* **Keras**

**Anaconda Navigator :**

Anaconda Navigator is included in the Anaconda distribution, and **allows users to** launch applications and manage conda packages, environments and channels without using command-line commands. Navigator can search for packages, install them in an environment, run the packages and update them.

* 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.Conda is an open-source, cross-platform,  package management system.
* Anaconda comes with so very nice tools like JupyterLab, Jupyter Notebook, QtConsole, Spyder, Glueviz, Orange, Rstudio, Visual Studio Code.
* For this project, we will be using Jupiter notebook and spyder

**Tensor flow:**

TensorFlow is a free and open-source software library for machine learning and artificial intelligence. It can be used across a range of tasks but has a particular focus on training and inference of deep neural networks.

* 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.
* Keras is a high-level, deep learning API developed by Google for implementing neural networks.
* It provides essential abstractions and building blocks for developing and shipping machine learning solutions with high iteration velocity.
* It supports the following features:
* Consistent, simple, and extensible API
* It supports multiple platforms and backends.
* Highly scalability of computation.