

## **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

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**Topic :** Fertilizers Recommendation System For Disease Prediction

As a prerequisite for our project(Fertilizers Recommendation System For Disease Prediction)we must 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. 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

### **Steps to install anaconda:**

- Go to browser and search anaconda.com
- Choose windows and click download button
- Run the downloaded anaconda executable file
- Make the necessary setup and finish the installation
- Using command prompt ,from anaconda spyder,jupyter notebook can be installed using the command “conda install toolname”
- 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 backends.
- It is user-friendly framework that runs on both CPU and GPU ● Highly scalability of computation.

**Flask:** Web framework used for building Web applications

### **Steps to install some necessary packages:**

- Open anaconda prompt
  - Use pip command for installation of packages
  - First we install sklearn(pip install sklearn)
  - Then we install some more packages like munpy,pandas,matplotlib,seaborn
    - Check if all the packages are installed successfully
  - We can also check if correct versions for all the packages are installed. ●
- Then we finally use the pip command to install flask(pip install flask)