V.S.B. ENGINEERING COLLEGE, KARUR

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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PREREQUISITIES

Date	17 November 2022
Team ID	PNT2022TMID33300
Project Name	Fertilizers Recommendation System for Disease Prediction

To develop this project we need to install the following software/packages:

1. 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 great tools like JupyterLab, Jupyter Notebook, QtConsole, Spyder, Glueviz, Orange, Rstudio, Visual Studio Code.

2. Flask:

Flask is a web development framework. It is a framework with a built-in development server and a debugger. Flask framework in itself is different from the other archetypes as it allows web developers to be flexible and to comfortably accommodate the frequently released changes in the software development community. Unlike the Django framework, Flask is very Pythonic. It's easy to get started with Flask, because it doesn't have a huge learning curve. On top of that it's very explicit, which increases readability. To create the "Hello World" app, you only need a few lines of code. For anaconda navigator, follow the below steps to download the required packages Open anaconda prompt as administrator If you are using PyCharm IDE, you can install the packages through the command prompt and follow the same syntax as above. Web framework used for building Web applications.

3. Python packages:

- open anaconda prompt as administrator
- Type "pip install NumPy" and click enter.
- Type "pip install pandas" and click enter.
- Type "pip install scikit-learn" and click enter.
- Type "pip install tensorflow==2.3.0" and click enter.
- Type "pip install karas==2.4.0" and click enter.
- Type "pip install Flask" and click enter.

4. Deep Learning Concepts:

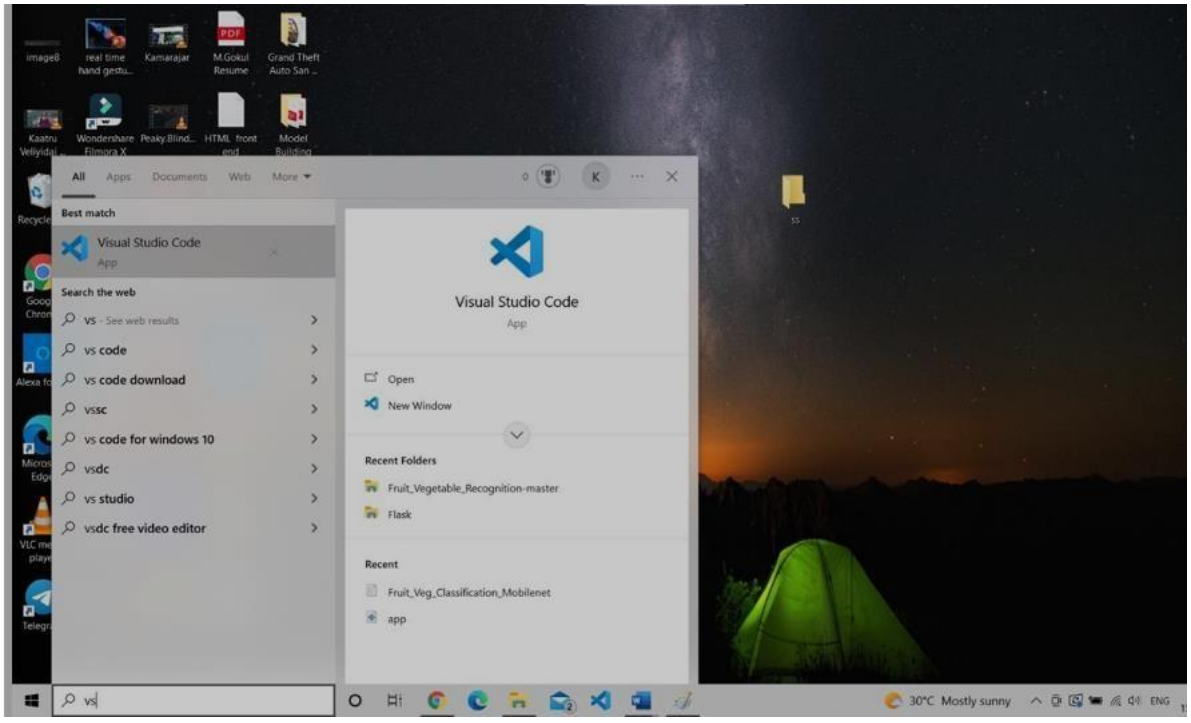
It is a subset of Machine Learning. Deep learning algorithms are perhaps best exemplified by multi-layer neural networks (NN), which use multi-layer neural networks to get an idea of imputed unsorted data based on learned traits. Uses basic concepts from brain biology. Useful when there is a quantity of input data.

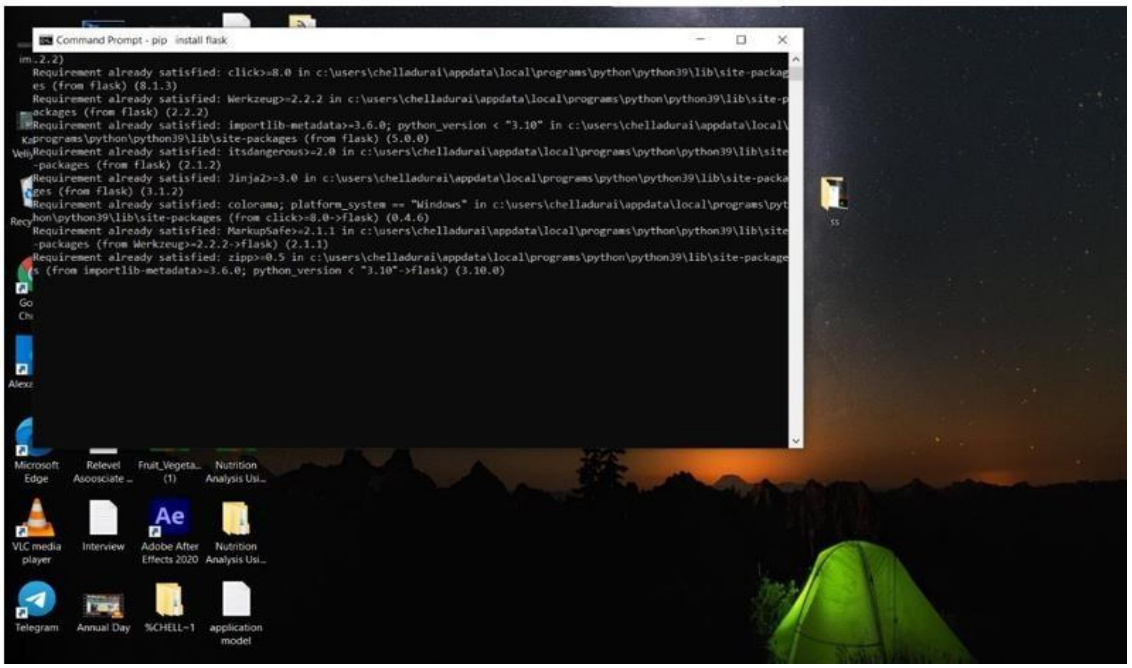
5. Artificial Neural Networks:

ANN is an efficient computing system whose central theme is borrowed from the analogy of biological neural networks. ANNs are also named “artificial neural systems,” or “parallel distributed processing systems,” or “connectionist systems.” ANN acquires a large collection of units that are interconnected in some pattern to allow communication between the units. These units, also called nodes or neurons, are simple processors that operate in parallel.

6. Convolution Neural Networks:

A convolutional neural network is a class of deep neural networks, most commonly applied to analyzing visual imagery. The construction of a convolutional neural network is a multi-layered feedforward neural network, made by assembling many unseen layers on top of each other in a particular order. It is the sequential design that gives permission to CNN to learn hierarchical attributes. In CNN, some of them are followed by grouping layers and hidden layers are typically convolutional layers followed by activation layers.




Command Prompt - pip install flask
Requirement already satisfied: click>=8.0 in c:\users\chelladurai\appdata\local\programs\python\python39\lib\site-packages (from flask) (8.1.3)
Requirement already satisfied: Werkzeug>=2.2.2 in c:\users\chelladurai\appdata\local\programs\python\python39\lib\site-packages (from flask) (2.2.2)
Requirement already satisfied: importlib-metadata>=3.6.0; python_version < "3.10" in c:\users\chelladurai\appdata\local\programs\python\python39\lib\site-packages (from flask) (5.0.0)
Requirement already satisfied: itsdangerous>=2.0 in c:\users\chelladurai\appdata\local\programs\python\python39\lib\site-packages (from flask) (2.1.2)
Requirement already satisfied: Jinja2>=3.0 in c:\users\chelladurai\appdata\local\programs\python\python39\lib\site-packages (from flask) (3.1.2)
Requirement already satisfied: colorama; platform_system == "Windows" in c:\users\chelladurai\appdata\local\programs\python\python39\lib\site-packages (from click>=8.0->flask) (0.4.6)
Requirement already satisfied: MarkupSafe>=2.1.1 in c:\users\chelladurai\appdata\local\programs\python\python39\lib\site-packages (from Werkzeug>=2.2.2->flask) (2.1.1)
Requirement already satisfied: zipp>=0.5 in c:\users\chelladurai\appdata\local\programs\python\python39\lib\site-packages (from importlib-metadata>=3.6.0; python_version < "3.10"->flask) (3.10.0)
Microsoft Edge
Relevel Asoosciate ...
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Nutrition Analysis Usi...
VLC media player
Interview
Adobe After Effects 2020
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Telegram
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application model