# Pre-Requisites

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|---|---|
| Date | 04 November 2022 |
| Team ID | PNT2022TMID51601 |
| Project Name | Emerging Methods for Early Detectionof Forest Fires |
| Team Members | Jose Vasanth A<br>Jijo K V<br>Linson J<br>Maria Vifil Joy S |

## Anaconda Navigator :

Anaconda Navigator is a free and open-source distribution of the Python and R programming languages for data science and machine learning relate 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

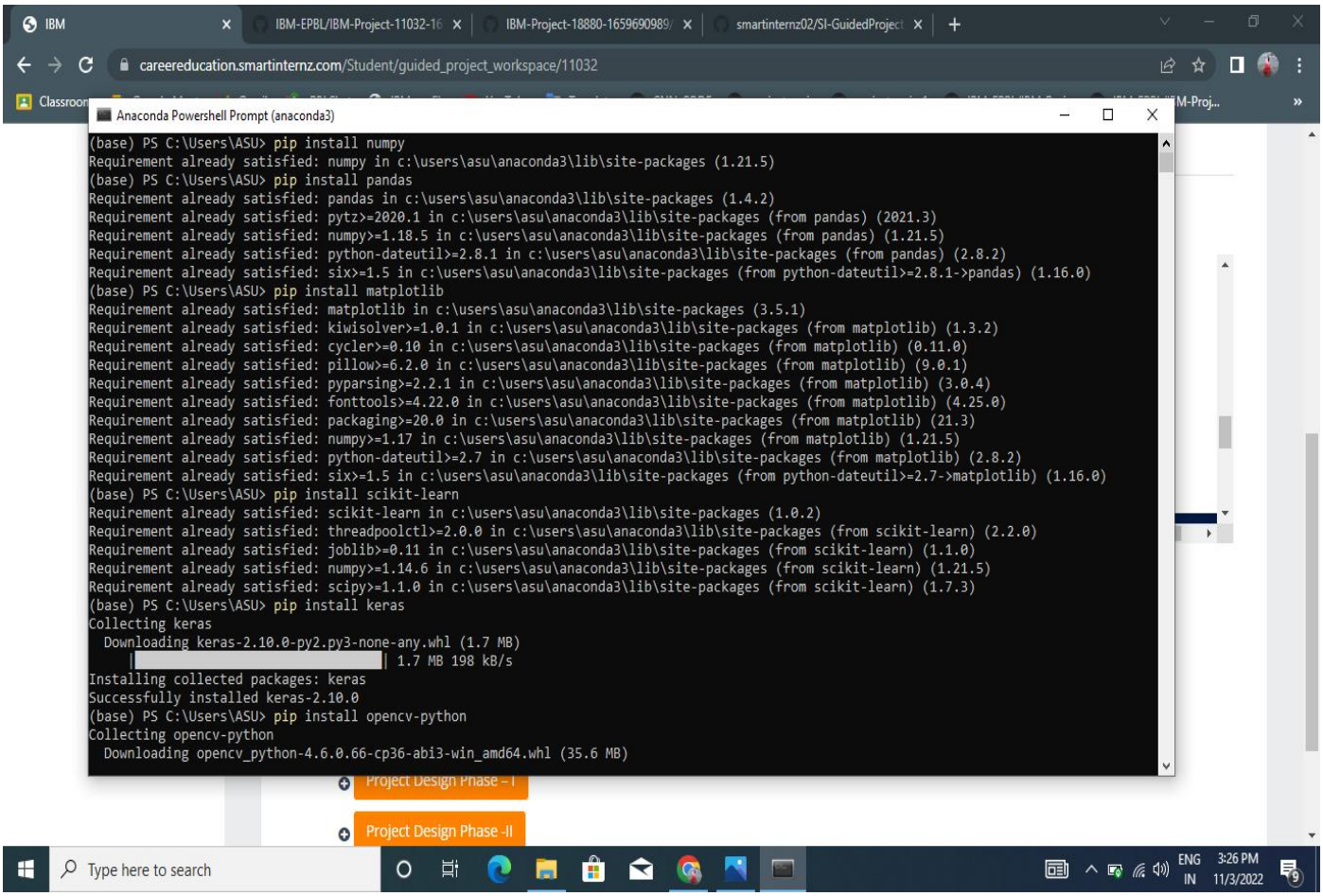
**Tensor flow**: Tensor Flow is an end-to-end open-source platform for machine learning. It has a comprehensive, flexible ecosystem of tools, libraries, and community resources that lets researchers push the state-of-the-art in ML and developers can easily build and deploy ML-powered applications.

**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 a user-friendly framework that runs on both CPU and GPU.
- Highly scalability of computation.

open cv: OpenCV is a library of programming functions mainly aimed at real-time computer vision

- Type “pip install numpy” and click enter.
- Type “pip install pandas” and click enter.
- Type “pip install matplotlib” and click enter.
- Type “pip install scikit-learn” and click enter.
- Type "pip install tensorflow==1.14.0” and click enter.
- Type "pip install keras=2.2.4” and click enter.
- Type "pip install opencv-python” and click enter.
- Type “pip install Flask” and click enter.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Anaconda Powershell Prompt (anaconda3)
(base) PS C:\Users\ASU> pip install numpy
Requirement already satisfied: numpy in c:\users\asu\anaconda3\lib\site-packages (1.21.5)
(base) PS C:\Users\ASU> pip install pandas
Requirement already satisfied: pandas in c:\users\asu\anaconda3\lib\site-packages (1.4.2)
Requirement already satisfied: pytz>=2020.1 in c:\users\asu\anaconda3\lib\site-packages (from pandas) (2021.3)
Requirement already satisfied: numpy>=1.18.5 in c:\users\asu\anaconda3\lib\site-packages (from pandas) (1.21.5)
Requirement already satisfied: python-dateutil>=2.8.1 in c:\users\asu\anaconda3\lib\site-packages (from pandas) (2.8.2)
Requirement already satisfied: six>=1.5 in c:\users\asu\anaconda3\lib\site-packages (from python-dateutil>=2.8.1->pandas) (1.16.0)
(base) PS C:\Users\ASU> pip install matplotlib
Requirement already satisfied: matplotlib in c:\users\asu\anaconda3\lib\site-packages (3.5.1)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\asu\anaconda3\lib\site-packages (from matplotlib) (1.3.2)
Requirement already satisfied: cycler>=0.10 in c:\users\asu\anaconda3\lib\site-packages (from matplotlib) (0.11.0)
Requirement already satisfied: pillow>=6.2.0 in c:\users\asu\anaconda3\lib\site-packages (from matplotlib) (9.0.1)
Requirement already satisfied: pyparsing>=2.2.1 in c:\users\asu\anaconda3\lib\site-packages (from matplotlib) (3.0.4)
Requirement already satisfied: fonttools>=4.22.0 in c:\users\asu\anaconda3\lib\site-packages (from matplotlib) (4.25.0)
Requirement already satisfied: packaging>=20.0 in c:\users\asu\anaconda3\lib\site-packages (from matplotlib) (21.3)
Requirement already satisfied: numpy>=1.17 in c:\users\asu\anaconda3\lib\site-packages (from matplotlib) (1.21.5)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\asu\anaconda3\lib\site-packages (from matplotlib) (2.8.2)
Requirement already satisfied: six>=1.5 in c:\users\asu\anaconda3\lib\site-packages (from python-dateutil>=2.7->matplotlib) (1.16.0)
(base) PS C:\Users\ASU> pip install scikit-learn
Requirement already satisfied: scikit-learn in c:\users\asu\anaconda3\lib\site-packages (1.0.2)
Requirement already satisfied: threadpoolctl>=2.0.0 in c:\users\asu\anaconda3\lib\site-packages (from scikit-learn) (2.2.0)
Requirement already satisfied: joblib>=0.11 in c:\users\asu\anaconda3\lib\site-packages (from scikit-learn) (1.1.0)
Requirement already satisfied: numpy>=1.14.6 in c:\users\asu\anaconda3\lib\site-packages (from scikit-learn) (1.21.5)
Requirement already satisfied: scipy>=1.1.0 in c:\users\asu\anaconda3\lib\site-packages (from scikit-learn) (1.7.3)
(base) PS C:\Users\ASU> pip install keras
Collecting keras
Downloading keras-2.10.0-py2.py3-none-any.whl (1.7 MB)
1.7 MB 198 kB/s
Installing collected packages: keras
Successfully installed keras-2.10.0
(base) PS C:\Users\ASU> pip install opencv-python
Collecting opencv-python
Downloading opencv_python-4.6.0.66-cp36-abi3-win_amd64.whl (35.6 MB)
Project Design Phase -I
Project Design Phase -II
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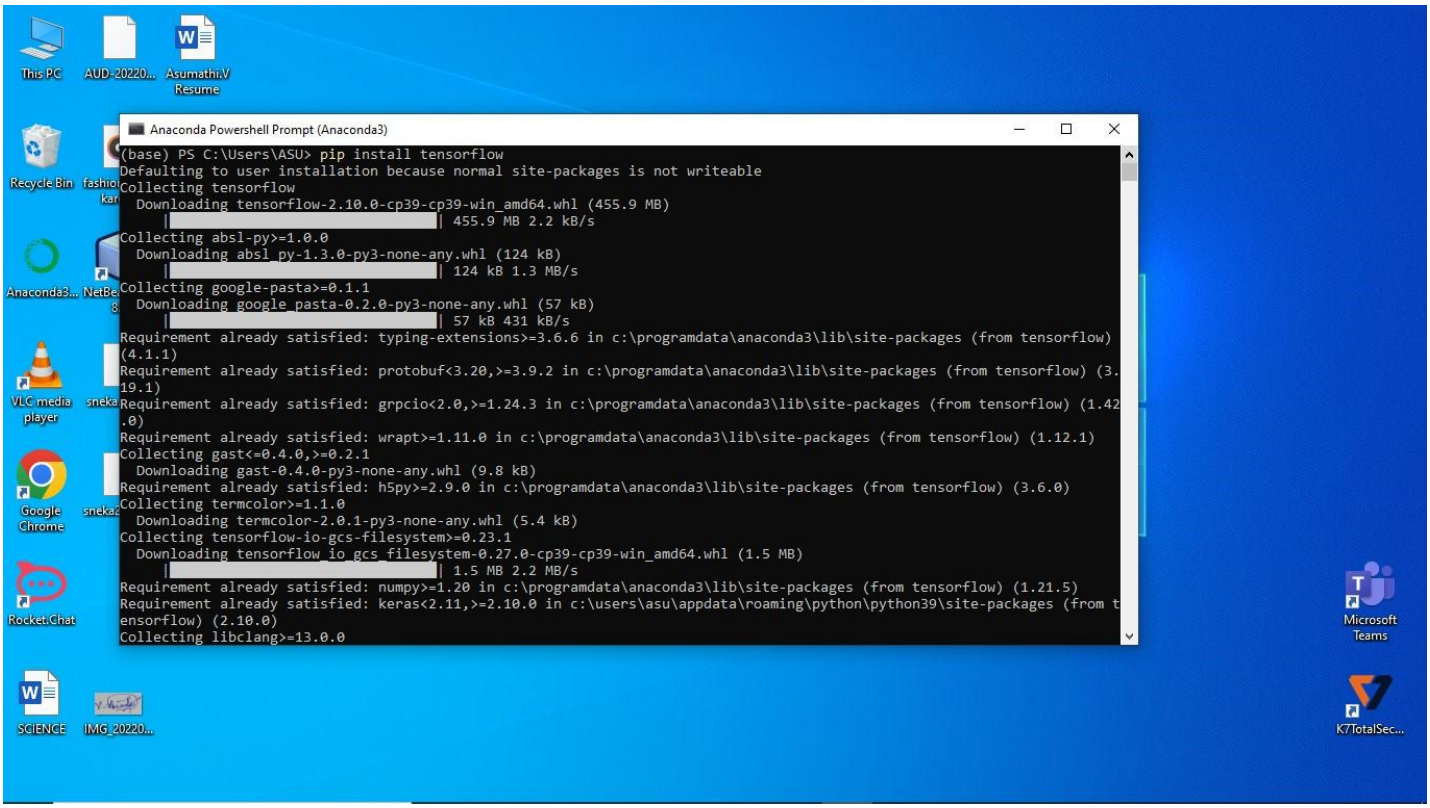
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AUD-20220...
Asumathi.V Resume
Recycle Bin
Anaconda3...
VLC media player
Google Chrome
Rocket.Chat
SCIENCE
IMG_20220...
Microsoft Teams
K7TotalSec...
Anaconda Powershell Prompt (Anaconda3)
(base) PS C:\Users\ASU> pip install tensorflow
Defaulting to user installation because normal site-packages is not writeable
Collecting tensorflow
Downloading tensorflow-2.10.0-cp39-cp39-win_amd64.whl (455.9 MB)
| 455.9 MB 2.2 kB/s
Collecting absl-py>=1.0.0
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| 124 kB 1.3 MB/s
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Downloading google_pasta-0.2.0-py3-none-any.whl (57 kB)
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Requirement already satisfied: protobuf<3.20,>=3.9.2 in c:\programdata\anaconda3\lib\site-packages (from tensorflow) (3.19.1)
Requirement already satisfied: grpcio<2.0,>=1.24.3 in c:\programdata\anaconda3\lib\site-packages (from tensorflow) (1.42.0)
Requirement already satisfied: wrapt>=1.11.0 in c:\programdata\anaconda3\lib\site-packages (from tensorflow) (1.12.1)
Collecting gast<=0.4.0,>=0.2.1
Downloading gast-0.4.0-py3-none-any.whl (9.8 kB)
Requirement already satisfied: h5py>=2.9.0 in c:\programdata\anaconda3\lib\site-packages (from tensorflow) (3.6.0)
Collecting termcolor>=1.1.0
Downloading termcolor-2.0.1-py3-none-any.whl (5.4 kB)
Collecting tensorflow-io-gcs-filesystem>=0.23.1
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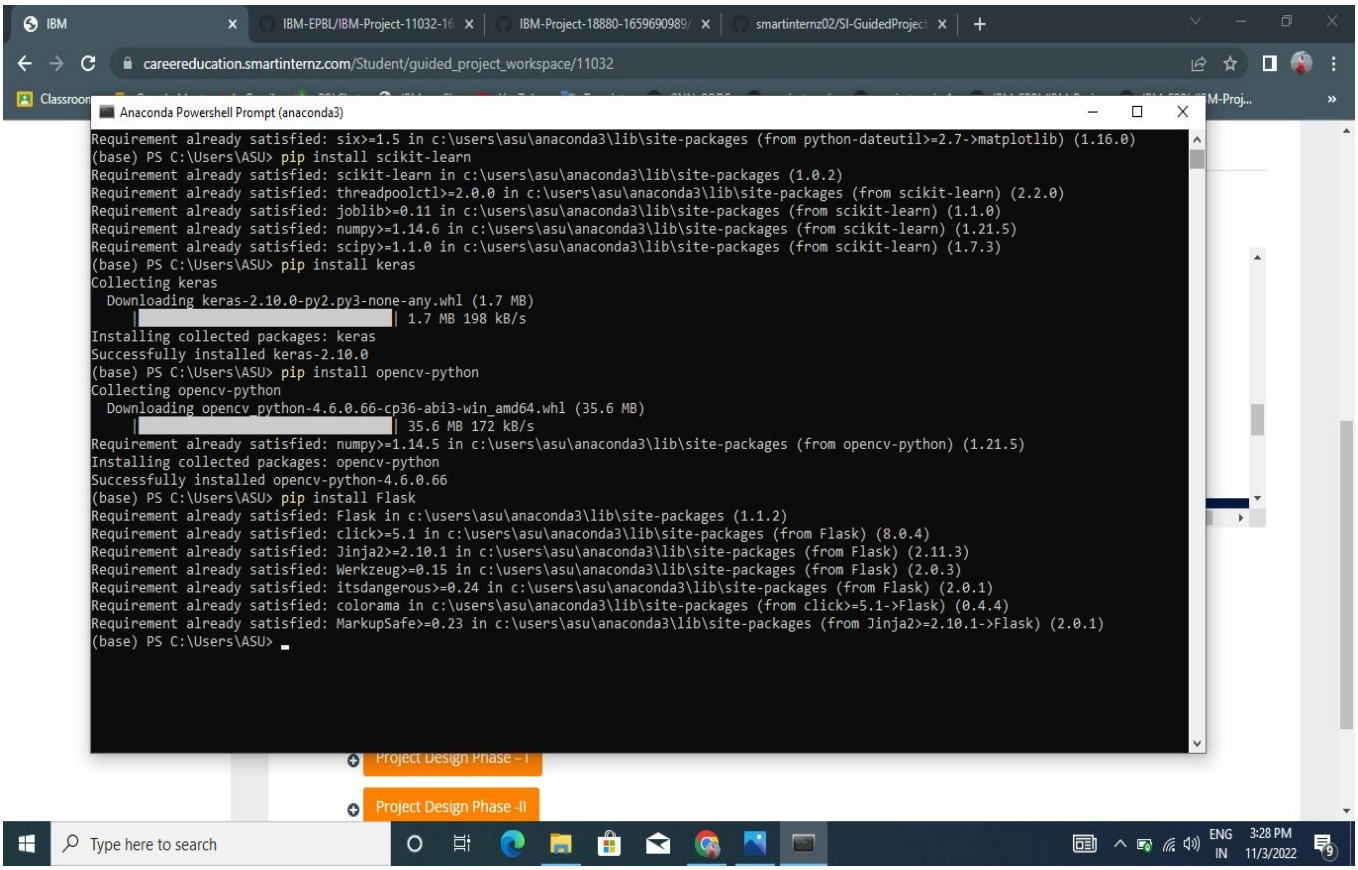
Requirement already satisfied: numpy>=1.20 in c:\programdata\anaconda3\lib\site-packages (from tensorflow) (1.21.5)
Requirement already satisfied: keras<2.11,>=2.10.0 in c:\users\asu\appdata\roaming\python\python39\site-packages (from tensorflow) (2.10.0)
Collecting libclang>=13.0.0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Requirement already satisfied: joblib>=0.11 in c:\users\asu\anaconda3\lib\site-packages (from scikit-learn) (1.1.0)
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35.6 MB 172 kB/s
Requirement already satisfied: numpy>=1.14.5 in c:\users\asu\anaconda3\lib\site-packages (from opencv-python) (1.21.5)
Installing collected packages: opencv-python
Successfully installed opencv-python-4.6.0.66
(base) PS C:\Users\ASU> pip install Flask
Requirement already satisfied: Flask in c:\users\asu\anaconda3\lib\site-packages (1.1.2)
Requirement already satisfied: click>=5.1 in c:\users\asu\anaconda3\lib\site-packages (from Flask) (8.0.4)
Requirement already satisfied: Jinja2>=2.10.1 in c:\users\asu\anaconda3\lib\site-packages (from Flask) (2.11.3)
Requirement already satisfied: Werkzeug>=0.15 in c:\users\asu\anaconda3\lib\site-packages (from Flask) (2.0.3)
Requirement already satisfied: itsdangerous>=0.24 in c:\users\asu\anaconda3\lib\site-packages (from Flask) (2.0.1)
Requirement already satisfied: colorama in c:\users\asu\anaconda3\lib\site-packages (from click>=5.1->Flask) (0.4.4)
Requirement already satisfied: MarkupSafe>=0.23 in c:\users\asu\anaconda3\lib\site-packages (from Jinja2>=2.10.1->Flask) (2.0.1)
(base) PS C:\Users\ASU>
Project Design Phase -I
Project Design Phase -II
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