

# Anaconda

The Operating System of AI

## Introduction

In this written tutorial, which includes images to guide you along the way, we'll walk you through the process of installing and setting up Anaconda and Jupyter Notebook on your system. You'll learn how to create and manage a new environment, install essential data science libraries, and get Jupyter Notebook up and running.

Don't worry if this isn't a visual tutorial! Written tutorials often provide a more detailed and thorough explanation, ensuring you don't miss any crucial steps. Plus, you can easily refer back to the written steps whenever needed. So, stick with us, and you'll have everything set up perfectly in no time.

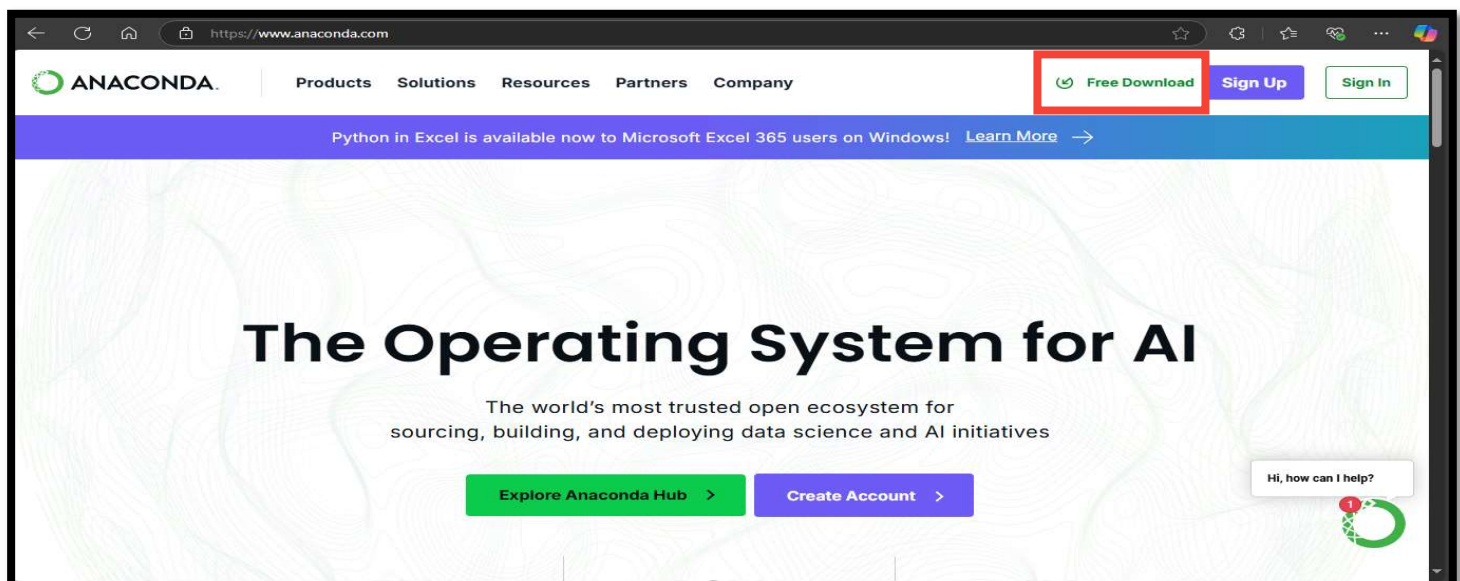
Anaconda is a popular open-source distribution of Python and R for scientific computing and data science. It simplifies package management and deployment, making it easier for users to install and maintain software libraries.

Jupyter Notebook is an open-source web application that allows you to create and share documents containing live code, equations, visualizations, and narrative text. It's an essential tool for data analysis, visualization, and machine learning, providing an interactive computing environment.

Now, let's get started with the setup!

## Step-by-Step Guide: Installation

1. Open any browser and type [www.anaconda.com](https://www.anaconda.com)
2. Click on Free Download in the Upper Right Corner.



- This shall take you to the page [www.anaconda.com/download](https://www.anaconda.com/download) where you shall be required to input your Email ID, checkmark the terms and conditions clause and hit Submit.

**Distribution**  
**Free Download\***

Register to get everything you need to get started on your workstation including Cloud Notebooks, Navigator, AI Assistant, Learning and more.

- ✓ Easily search and install thousands of data science, machine learning, and AI packages
- ✓ Manage packages and environments from a desktop application or work from the command line
- ✓ Deploy across hardware and software platforms
- ✓ Distribution installation on Windows, MacOS, or Linux

**Provide email to download Distribution**

Email Address: **Email Required Here**

☐ Agree to receive communication from Anaconda regarding relevant content, products, and services. I understand that I can revoke this consent [here](#) at any time.

By continuing, I agree to Anaconda's [Privacy Policy](#) and [Terms of Service](#).

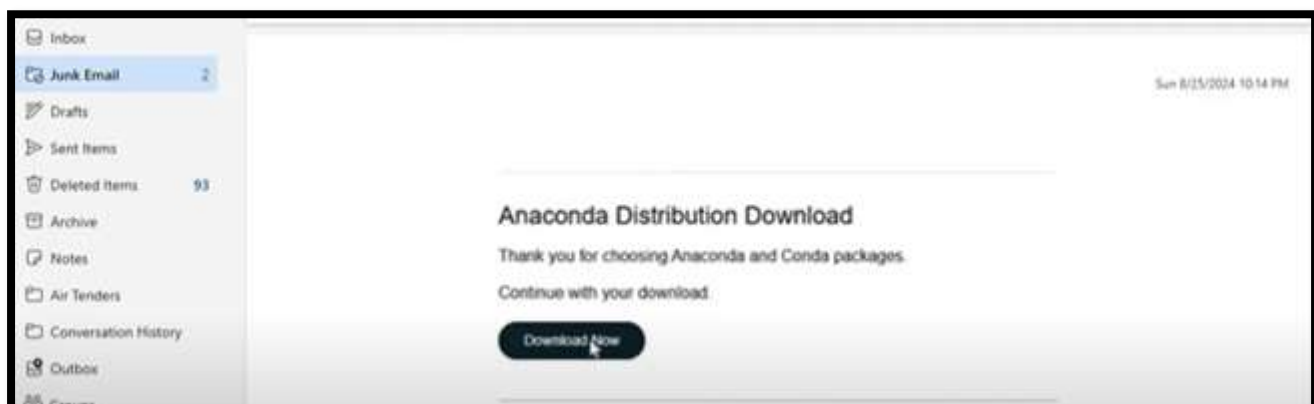
**Submit** >

\*Skip registration

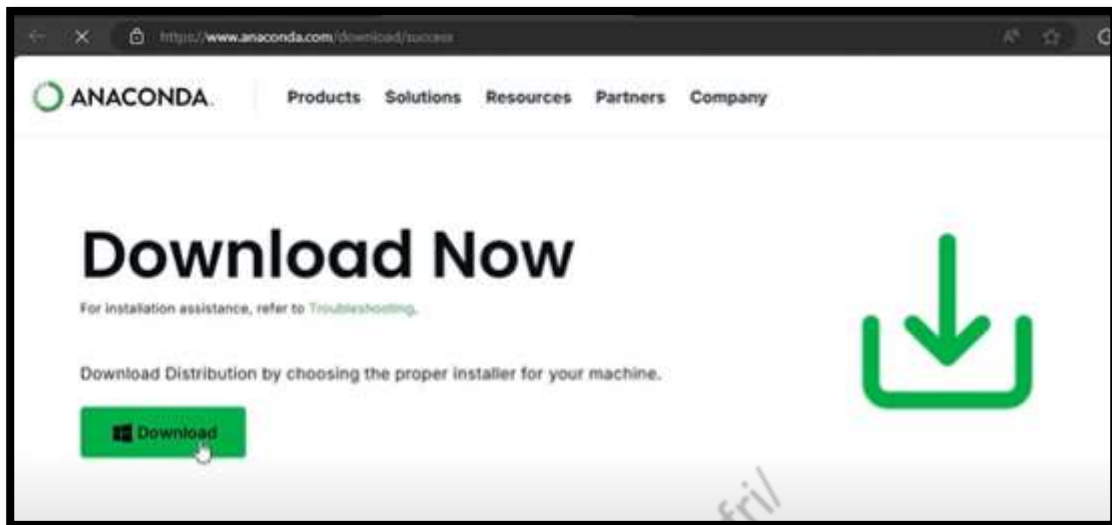
- An Installation Link shall be sent to your Email ID (check Spam Folder as well).



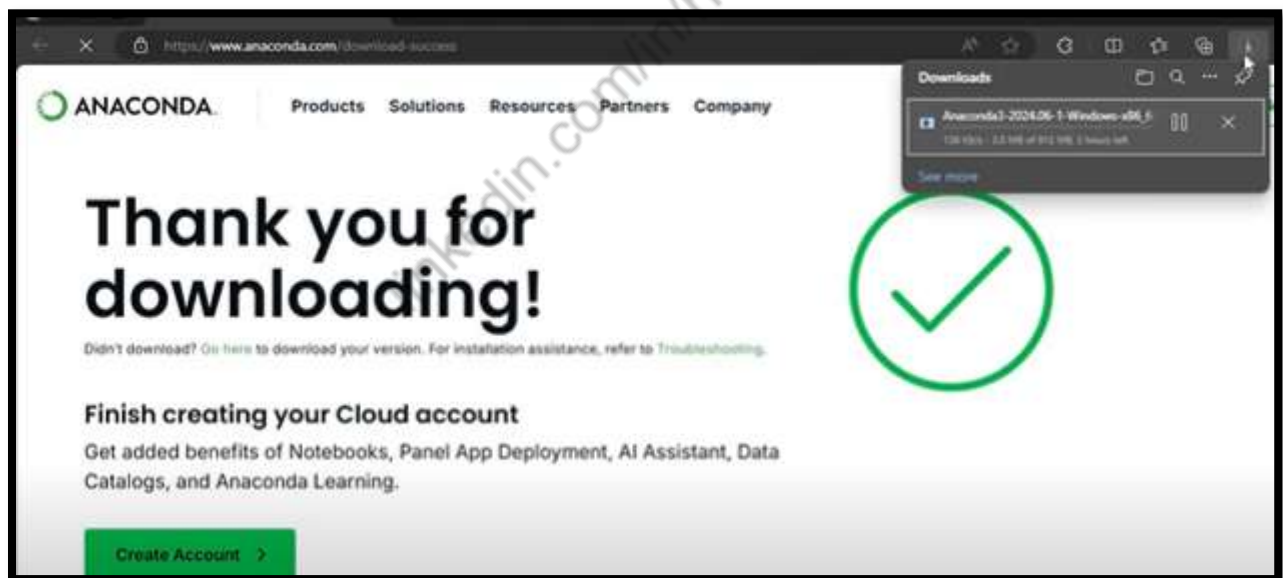
- Open the email and click on Download Now.



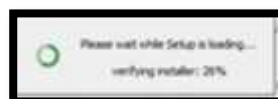
6. This shall take you to the link [www.anaconda.com/download/success](https://www.anaconda.com/download/success) where you are required to Click on “Download” to start Anaconda Setup Installation.



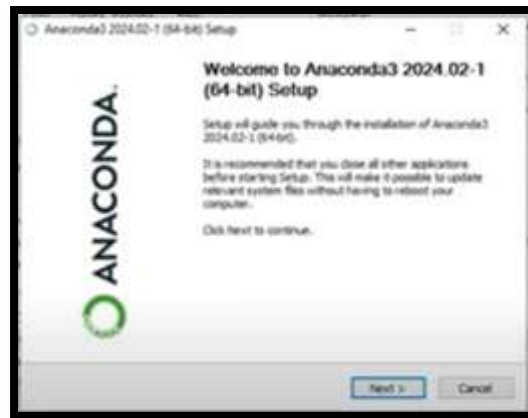
7. Download shall begin.



8. Wait for Download to complete. Go to Download Folder (or wherever you have downloaded the Anaconda Installation Setup). You shall find the Setup File. Double Click on it and Setup shall start loading.

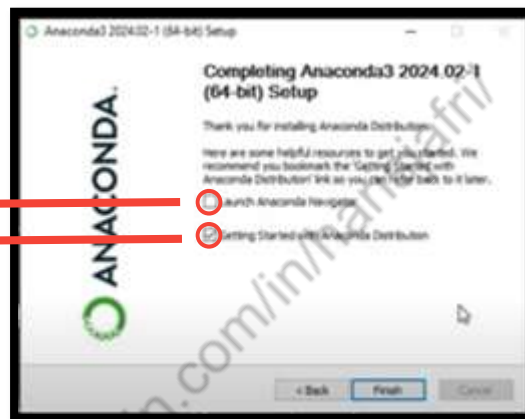


- Once setup begins, keep on clicking “Next” button.



- Once the window reaches a stage where “Finish” button is visible. **Uncheck** “Launch Anaconda Navigator” and **Uncheck** “Getting Started with Anaconda Navigator” before clicking “Finish”.

Uncheck both boxes



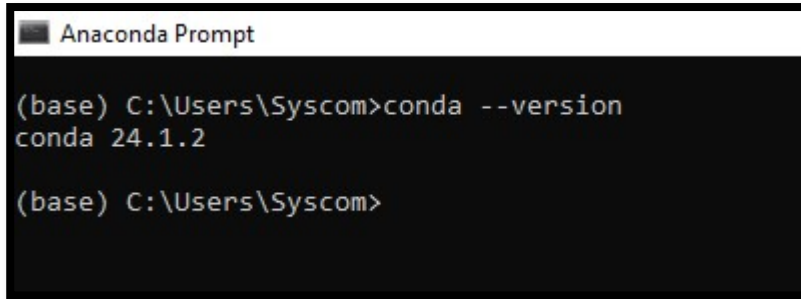
You have now Anaconda installed in your System. Now we have to setup the System.

## Step-by-Step Guide: Setup

- Go to Search Bar at the Bottom of your Screen and type “Anaconda Prompt”.
- Click and Open the Anaconda Prompt.



3. Type and run “conda --version” to check which version of Anaconda you are using.

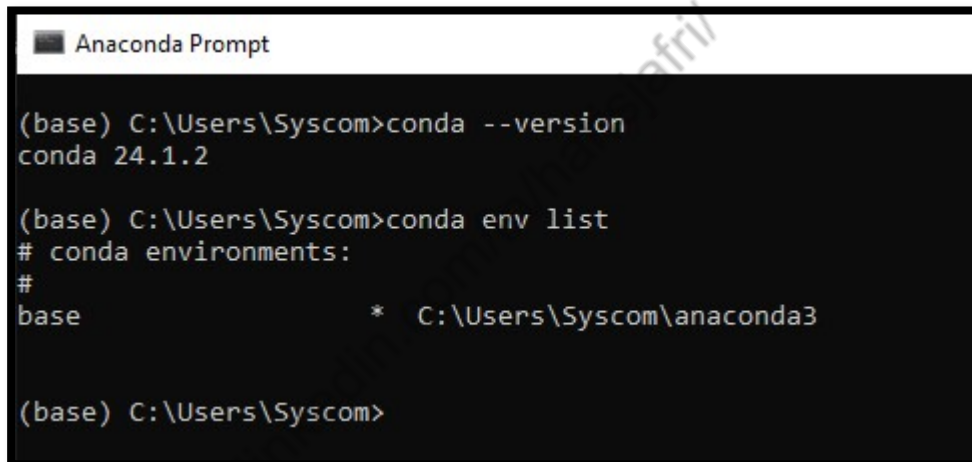


```
Anaconda Prompt

(base) C:\Users\Syscom>conda --version
conda 24.1.2

(base) C:\Users\Syscom>
```

4. Type and run “conda env list” to find out about available environments.
  - a. “base” shall be only environment available after installing Anaconda.
  - b. “base” is the default environment of Anaconda
  - c. It is recommended not to use “base” environment as changes made to the base environment can affect your entire system, including other applications that rely on Python.



```
Anaconda Prompt

(base) C:\Users\Syscom>conda --version
conda 24.1.2

(base) C:\Users\Syscom>conda env list
# conda environments:
#
base                  *  C:\Users\Syscom\anaconda3

(base) C:\Users\Syscom>
```

5. Create a separate environment isolated from the base environment so that:
  - a. You can isolate project dependencies
  - b. Avoid conflicts
  - c. Ensure reproducibility
  - d. Type and run “conda create -n <Your\_Env\_Name>” (I named my environment **jafrienv**, you can name as per your liking), do not forget to type “y” when it asks to proceed.

```

Anaconda Prompt
(base) C:\Users\Syscom>conda create -n jafrienv
Retrieving notices: ...working... done
Channels:
 - defaults
Platform: win-64
Collecting package metadata (repodata.json): done
Solving environment: done

## Package Plan ##

  environment location: C:\Users\Syscom\anaconda3\envs\jafrienv

Proceed ([y]/n)? y

Preparing transaction: done
Verifying transaction: done
Executing transaction: done
#
# To activate this environment, use
#
#     $ conda activate jafrienv
#
# To deactivate an active environment, use
#
#     $ conda deactivate

```

6. Let us recheck the available environments. Notice that star is in front of base environment.

```

(base) C:\Users\Syscom>conda env list
# conda environments:
#
base                * C:\Users\Syscom\anaconda3
jafrienv            C:\Users\Syscom\anaconda3\envs\jafrienv

```

7. Type “conda activate <Your\_Env\_Name>” to shift from “base” environment to new environment.

```

(base) C:\Users\Syscom>conda activate jafrienv
(jafrienv) C:\Users\Syscom>

```

(Notice that \* shall be displayed in front of your new environment name when you type and run “conda env list” )



8. Type and run “conda install jupyter” to install the core Jupyter Notebook application inside your new environment, do not forget to type “y” when it asks to proceed.

```
(jafrienv) C:\Users\Syscom>conda install jupyter
```

9. Type and run “conda install numpy pandas matplotlib seaborn scikit-learn scipy statsmodels” to install the seven core Data Science Libraries available in Python, do not forget to type “y” when it asks to proceed.
  - a. *numpy*: Provides efficient numerical operations and array manipulation.
  - b. *pandas*: Offers powerful data analysis and manipulation tools for structured data.
  - c. *matplotlib*: A versatile library for creating static, animated, and interactive visualizations.
  - d. *seaborn*: A high-level data visualization library based on Matplotlib, providing aesthetically pleasing plots.
  - e. *scikit-learn*: A comprehensive machine learning library for tasks like classification, regression, clustering, and model selection.
  - f. *scipy*: A collection of scientific computing algorithms and functions, including optimization, integration, and signal processing.
  - g. *statsmodels*: A library for statistical modeling, including regression analysis, time series analysis, and hypothesis testing.

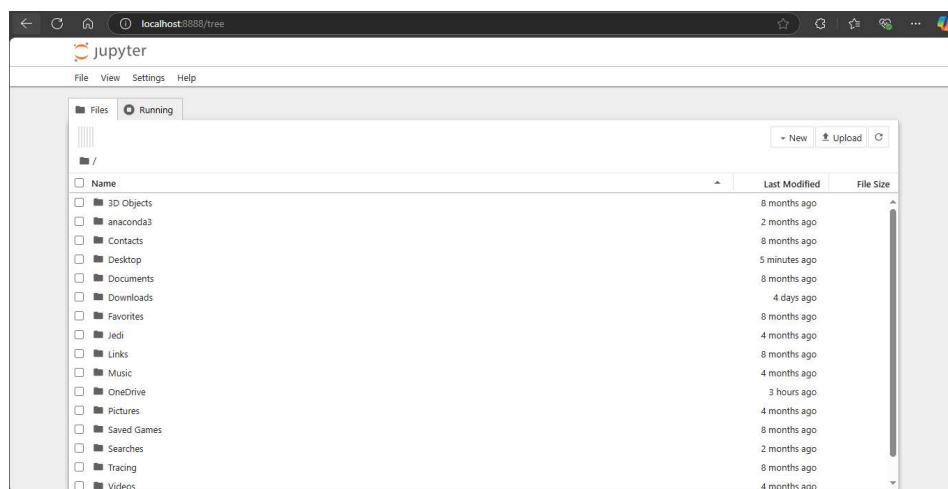
```
(jafrienv) C:\Users\Syscom>conda install numpy pandas matplotlib seaborn scikit-learn scipy statsmodels
```

10. Type and run “python -m ipykernel install --user --name=<Your\_Env\_Name>”

```
(jafrienv) C:\Users\Syscom>python -m ipykernel install --user --name=jafrienv
```

11. Every thing required to pursue our Data Science Journey has been installed. Just type in “jupyter notebook” now and it shall open a Jupyter Notebook using your default web browser.

```
(jafrienv) C:\Users\Syscom>jupyter notebook
```



A View of Browser with Jupyter!