

Step 1: Install Conda

Option 1: Install Miniconda (Recommended)

- Lightweight version of Anaconda (you install only what you need).
- Go to: [Miniconda Download Page](#)
- Choose your OS: Windows, macOS, or Linux.
- Download and install. For Linux:

```
wget
https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86_64.sh
bash Miniconda3-latest-Linux-x86_64.sh
```

- Follow the prompts and restart your shell.

Option 2: Install Anaconda

- Heavier version (comes with 100+ packages pre-installed).
- Use this if you want everything (Jupyter, NumPy, SciPy, Pandas, etc.) out of the box.

Step 2: Create a New Environment

Environments help you isolate different projects and versions.

```
conda create --name myenv python=3.10
```

This creates a new environment named `myenv` with Python 3.10.

Step 3: Activate Your Environment

```
conda activate myenv
```

You'll see `(myenv)` in your terminal prompt — now you're using it!

Step 4: Install Packages

You can now install packages inside this environment:

```
conda install numpy scipy matplotlib
```

Or use `pip` for anything not available via `conda`:

```
pip install jupyterlab
```

Step 5: Check Installed Packages

```
conda list
```

Step 6: Save and Share Your Environment

Save it to a file:

```
conda env export > environment.yml
```

Recreate from file:

```
conda env create -f environment.yml
```

Step 7: Deactivate and Remove

- To deactivate current env:

```
conda deactivate
```

- To delete:

```
conda remove --name myenv --all
```

Example Use Case: ROS + Python Toolchain (with Pinocchio or MPC)

If you're doing robotics (like your ROS + Gazebo + MATLAB projects), you might do:

```
conda create -n robot_mpc python=3.10 numpy scipy matplotlib jupyter pinocchio  
conda activate robot_mpc
```