9. Jupyter Lab plugin installation

Installing plugins can enhance the functionality of Jupyter Lab and provide more tools and features.

1. Install Node.js

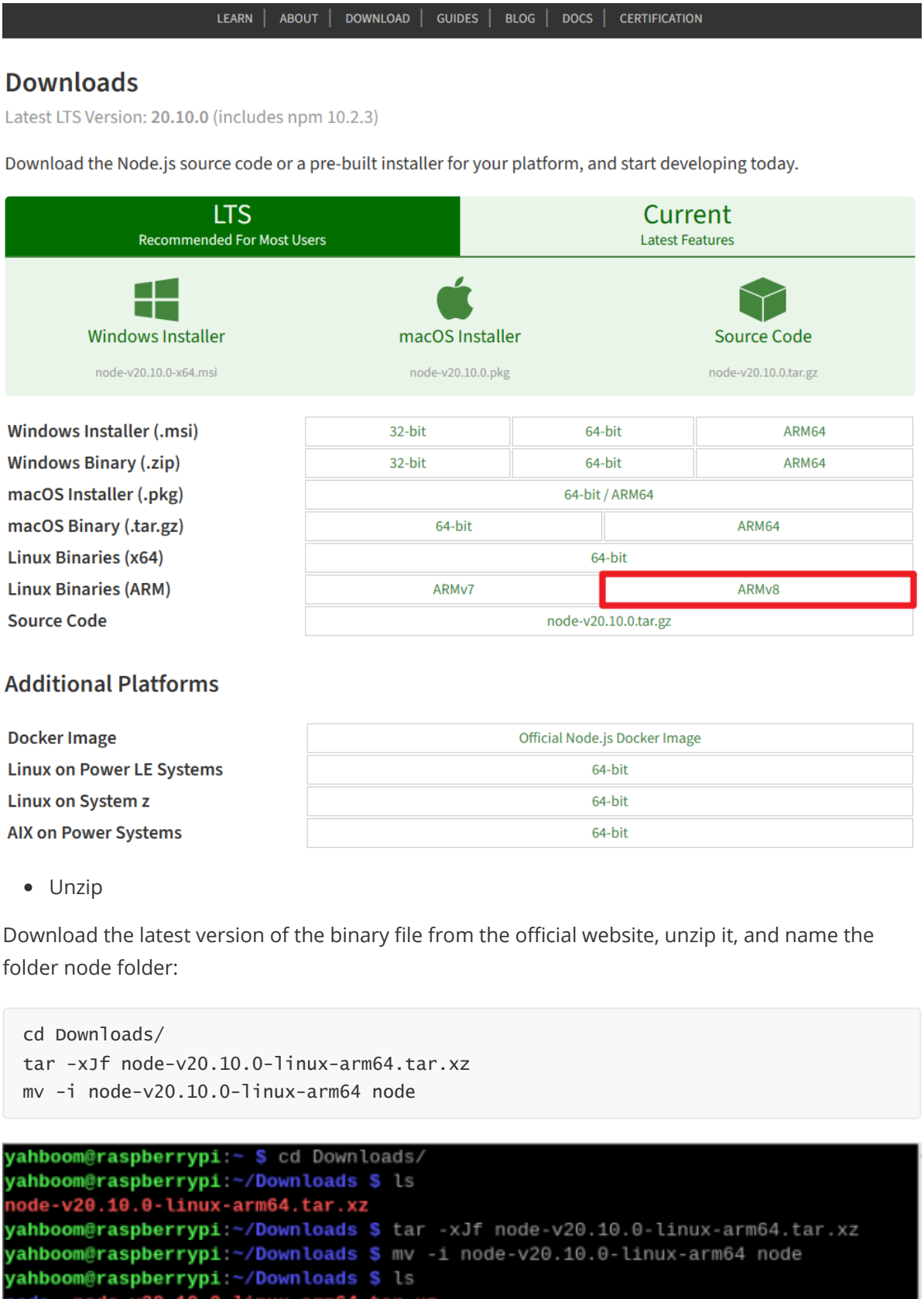
- Check the architecture of the Raspberry Pi

```
uname -a
```

Select the Node.js version for the ARMv8 architecture for installation

- Download Node.js

```
https://nodejs.org/en/download/
```



- Unzip

Download the latest version of the binary file from the official website, unzip it, and name the folder node folder:

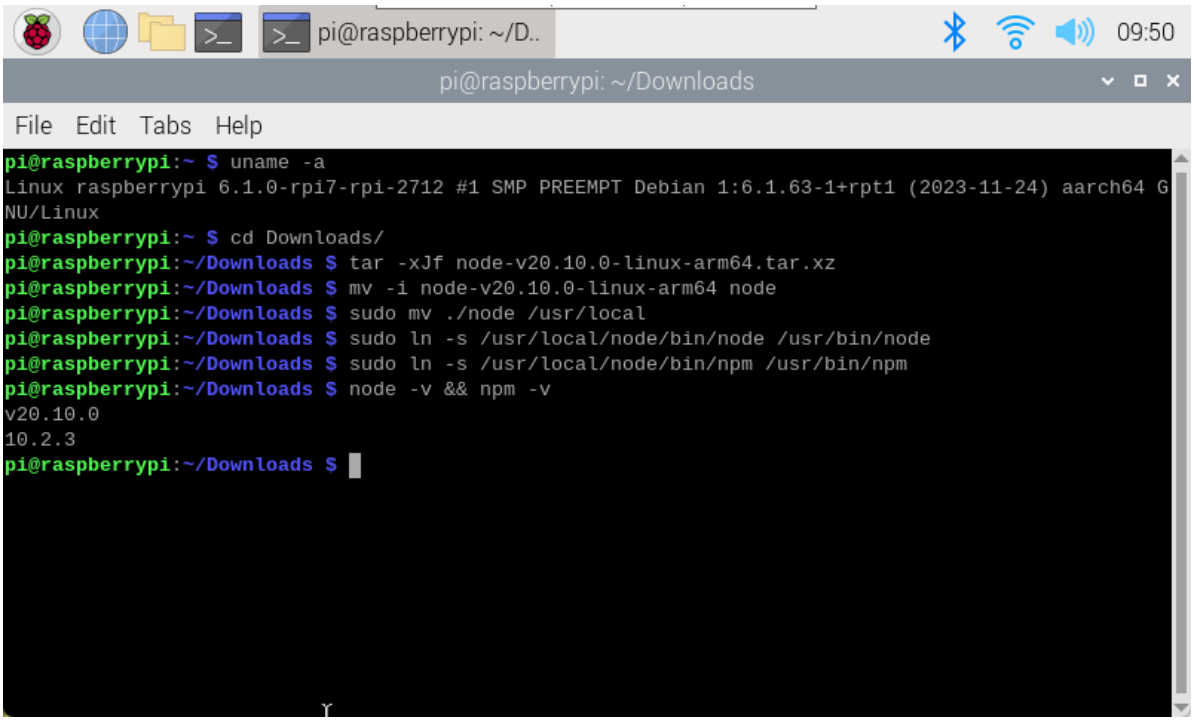
```
cd Downloads/
tar -xJf node-v20.10.0-linux-arm64.tar.xz
mv -i node-v20.10.0-linux-arm64 node
```


- Move the binary file and add a soft link

```
sudo mv ./node /usr/local
sudo ln -s /usr/local/node/bin/node /usr/bin/node
sudo ln -s /usr/local/node/bin/npm /usr/bin/npm
```

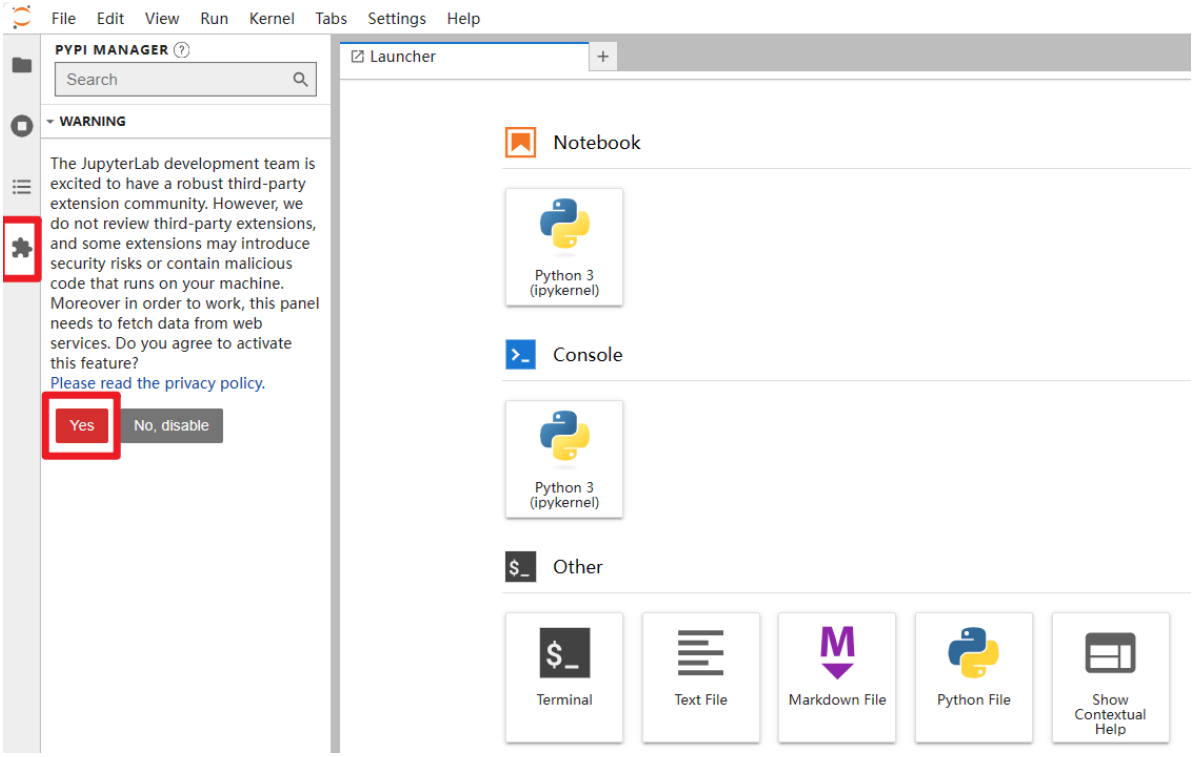
- Check if node and npm are installed successfully

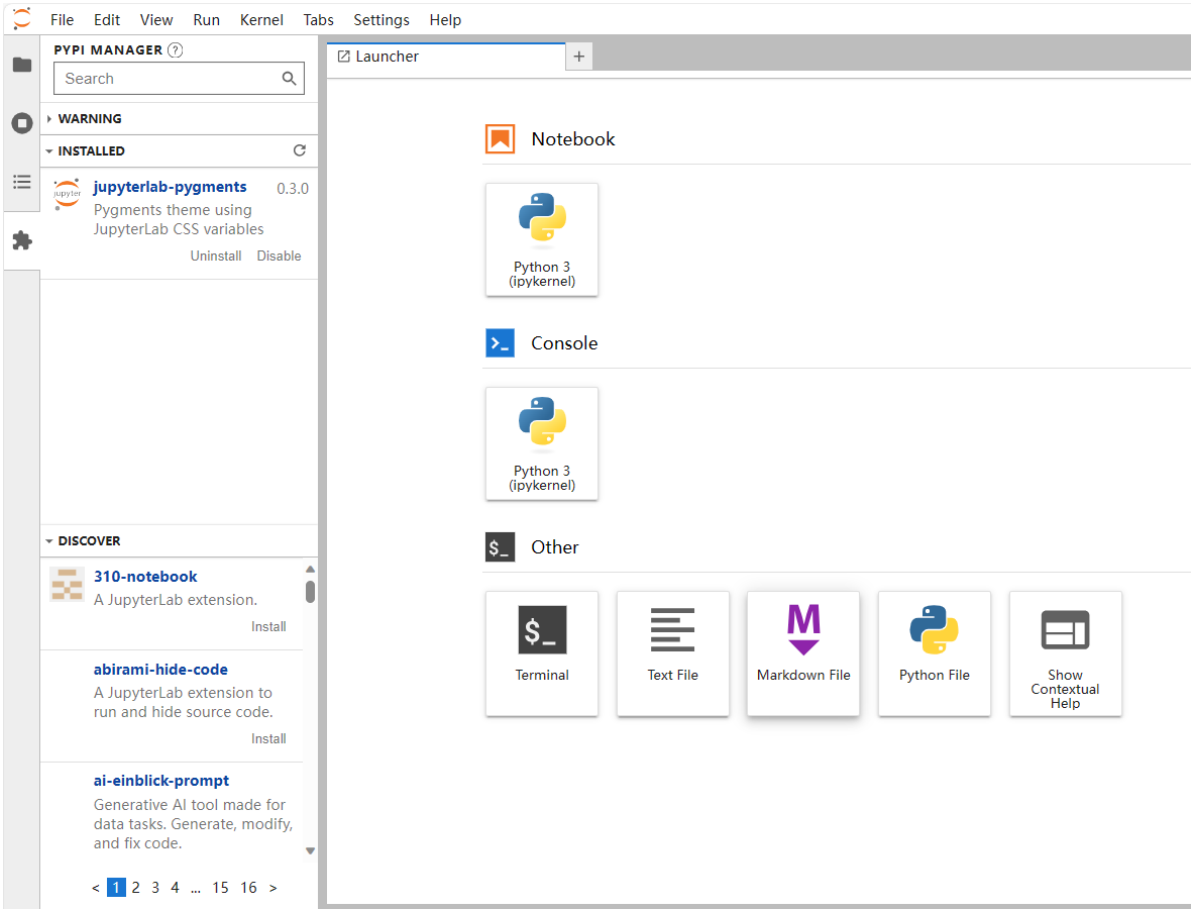
```
node -v && npm -v
```



2. Enable plugins

Turn on third-party extension support in Jupyter Lab.

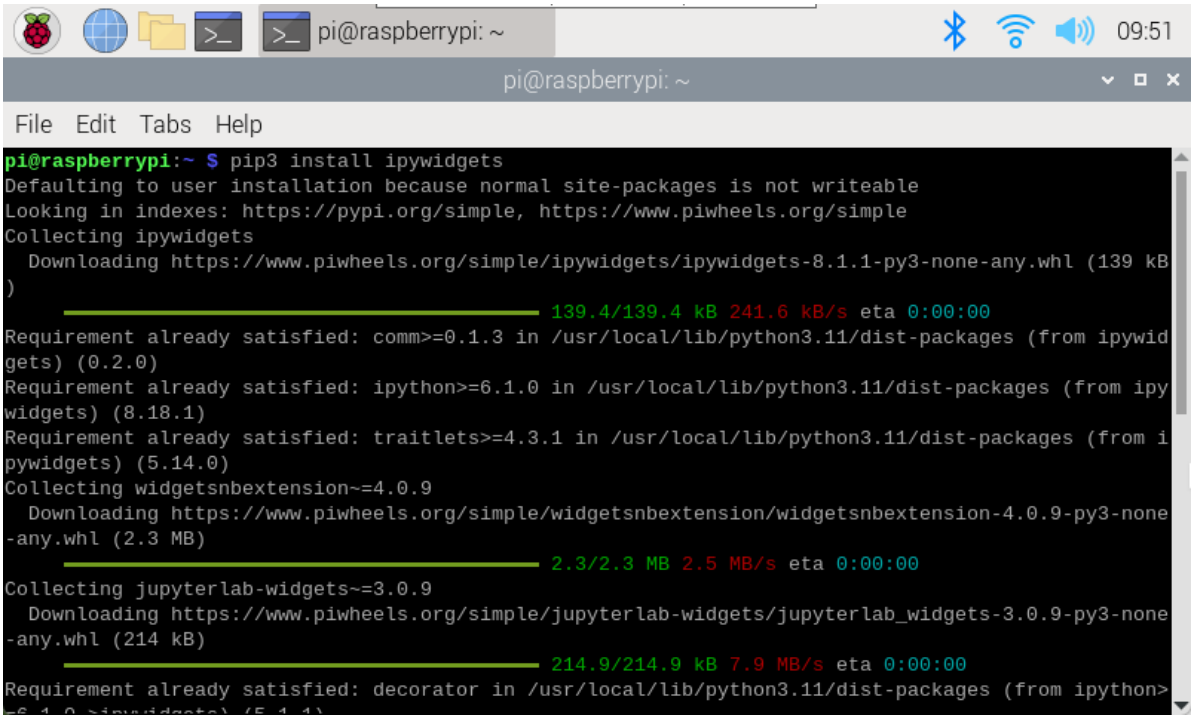




3. Install extension packages

```
pip3 install ipywidgets
```

Provides the ability to create interactive widgets in Jupyter Lab.




```
pip3 install matplotlib
```

Functions for creating various types of graphs and visualizations in Python, including line graphs, scatter plots, histograms, and more.