

Software Requirements

(To Be Installed on All Participant Machines)

1. Python Version:

- **Python 3.10 or above**
- Recommended via **Anaconda Distribution** for ease of setup.

Download Anaconda:

<https://www.anaconda.com/products/distribution>

Anaconda includes Spyder IDE, JupyterLab, and many core libraries.

2. IDE: Spyder

- **Version bundled with Anaconda is sufficient.**
- Alternatively, install via:

```
pip install spyder
```

Required Python Packages (Latest Stable Versions Recommended)

Please ensure the following packages are installed either via `conda` or `pip`:

```
numpy
pandas
matplotlib
scipy
pyvisa
pyserial
requests
flask
fastapi
uvicorn
socket (standard library)
pyusb
openpyxl
jupyterlab
pymodbus    # If needed for modbus protocol
pytest      # For testing demonstrations
```

Note:

- `socket` is included in Python's standard library and doesn't require separate installation.

- Internet access is recommended on Day 1 in case any packages are missing.
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Permissions Required

- **Admin Access or Sudo Rights:** Needed to install packages if not pre-installed.
- **Internet Access (Day 1):** For setting up environments and resolving any package issues.