

Setup Instructions for the Jupyter Notebook

Introduction

This document provides step-by-step instructions to set up the environment required to run the provided Jupyter Notebook. Follow these steps carefully to ensure proper setup.

Step 1: Verify Python Installation

1. Open a terminal (macOS/Linux) or Command Prompt (Windows).
2. Check if Python is installed by running:

```
1 python3 --version
```

or

```
1 python --version
```

3. If Python is not installed:
 - Download Python from <https://www.python.org/downloads/>.
 - Install it and ensure the option to "Add Python to PATH" is selected during installation.

Step 2: Check for an Existing Virtual Environment

1. Navigate to the project directory where the Jupyter Notebook is located:

```
1 cd /path/to/your/project
```

2. Look for a folder named `accimap_env` (or any other virtual environment folder):

```
1 ls # macOS/Linux  
2 dir # Windows
```

3. If a virtual environment folder exists (e.g., `accimap_env`), proceed to **Step 4**.

Step 3: Create a New Virtual Environment

1. If no virtual environment exists, create one:

```
1 python3 -m venv accimap_env
```

or, on Windows:

```
1 python -m venv accimap_env
```

2. Activate the virtual environment:

- macOS/Linux:

```
1 source accimap_env/bin/activate
```

- Windows:

```
1 accimap_env\Scripts\activate
```

3. You should now see (accimap_env) at the beginning of your terminal prompt, indicating the virtual environment is active.

Step 4: Install Necessary Packages

1. Ensure the virtual environment is activated (if not, follow Step 3.2).
2. Install Jupyter and the required kernel package:

```
1 pip install jupyter ipykernel
```

Step 5: Add the Virtual Environment to Jupyter

1. Register the virtual environment as a Jupyter kernel:

```
1 python -m ipykernel install --user --name=accimap_env --  
    display-name "Python (accimap_env)"
```

Step 6: Launch Jupyter Notebook

1. Start Jupyter Notebook:

```
1 jupyter notebook
```

2. Navigate to the .ipynb file and open it.

3. In the Jupyter interface:

- Go to **Kernel** > **Change Kernel**.
- Select **Python (accimap_env)**.

Step 7: Troubleshooting

- Verify that the virtual environment is activated:

```
1   which python    # macOS/Linux
2   where python    # Windows
```

The output should point to the `accimap_env/bin/python` path.

- Check the installed packages:

```
1   pip list
```

Ensure all required packages are installed. If not, install them with:

```
1   pip install <package-name>
```

- Deactivate the virtual environment when finished:

```
1   deactivate
```

Quick Summary of Commands

If Starting from Scratch:

```
1 python3 -m venv accimap_env
2 source accimap_env/bin/activate # macOS/Linux
3 accimap_env\Scripts\activate   # Windows
4 pip install jupyter ipykernel
5 python -m ipykernel install --user --name=accimap_env --display-
   name "Python (accimap_env)"
6 jupyter notebook
```

If the Virtual Environment Already Exists:

```
1 source accimap_env/bin/activate # macOS/Linux
2 accimap_env\Scripts\activate   # Windows
3 pip install jupyter ipykernel
4 python -m ipykernel install --user --name=accimap_env --display-
   name "Python (accimap_env)"
5 jupyter notebook
```