

Miniforge + Conda Environments on macOS: Student Setup Guide

Step 1: Download Miniforge

1. Go to: <https://github.com/conda-forge/miniforge>
2. Under 'Assets', download the file named:
Miniforge3-MacOSX-arm64.sh (for Apple Silicon)
Miniforge3-MacOSX-x86_64.sh (for Intel Macs)
3. Save the file to your Downloads folder.

Step 2: Install Miniforge

1. Open the Terminal app.
2. Run the installer script:
`cd ~/Downloads`
`bash Miniforge3-MacOSX-arm64.sh` (or `x86_64` if you're on Intel)
3. Follow the prompts:
 - Accept license agreement
 - Confirm installation location (default is fine)
 - Allow it to initialize conda in your shell

Step 3: Restart Terminal

1. Close and reopen the Terminal app
2. You should now see (base) in your prompt

Step 4: Create a New Conda Environment

1. Create a new environment with Python 3.11:
`conda create -n research python=3.11`
2. Activate it:
`conda activate research`

Step 5: Install Packages

1. With your environment active, install packages:
`conda install numpy pandas jupyterlab`
`conda install -c conda-forge matplotlib scipy`
`pip install seaborn`

Step 6: Launch JupyterLab (Optional)

1. From the terminal inside your conda env:
`jupyter lab`
2. This will open JupyterLab in your browser

Step 7: Managing Environments

- List all environments:
`conda env list`
- Remove an environment:
`conda env remove -n research`

Troubleshooting Tips

- If 'conda' is not found, ensure Miniforge added init to ~/.zshrc or ~/.bash_profile
- To update conda itself:
conda update conda
- To deactivate your environment:
conda deactivate