

# [MacOS] Setup | Pelatihan Genap 2025: Image Processing

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## NOTE!!!

- I highly encourage you to use Linux and get familiar with it. Even if you're using Windows, you'll install WSL (Windows Subsystem for Linux) to get a similar workflow as Linux.
- If you have questions, feel free to ask in the WhatsApp group chat or Microsoft Teams.

## MacOS Setup

- **Installing Homebrew**

1. Open the Terminal
2. Install Homebrew (if not installed)  

```
/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
```
3. Verify the installation  

```
brew --version
```

- **Installing Miniconda**

1. Open the Terminal
2. Download the MacOS Miniconda Installer  

```
curl https://repo.anaconda.com/miniconda/Miniconda3-latest-MacOSX-x86_64.sh -o ~/Downloads/Miniconda3-latest-MacOSX.sh
```
3. Run the installer  

```
bash ~/Downloads/Miniconda3-latest-MacOSX.sh
```
4. Follow the installer instructions
5. Initialize Miniconda  

```
source ~/.zshrc
```

or

```
conda activate base
```

| **Side note:** `base` is the default environment, made by the Miniconda
6. Download the environment file  

```
wget -P ~/Downloads https://raw.githubusercontent.com/sulaimanfawwazak/Pelatihan-Vision-2025/main/environment.yml
```
7. Create the environment  

```
conda env create --name imageproc -f ~/Downloads/environment.yml
```
8. Activate the environment  

```
conda activate imageproc
```

- **Setting Up Jupyter Notebook**

1. Open the Terminal
2. Activate the environment

```
conda activate imageproc
```
3. Install Jupyter

```
conda install -y jupyter
```
4. Install additional dependencies

```
conda install -c conda-forge nb_conda opencv
```
5. Setup the Jupyter Kernel

```
python -m ipykernel install --user --name imageproc --display-name "Python (Image Processing)"
```
6. Run the Jupyter Notebook

```
mkdir pelatihan-genap
cd pelatihan-genap
jupyter notebook
```

- **Installing Visual Studio Code (VS Code)**

1. Download the [.zip](https://code.visualstudio.com/) installer file from <https://code.visualstudio.com/>
2. Click twice on the downloaded file to start the installation
3. Open the VS Code
4. Open the extension menu
5. Install these extensions:
  - Jupyter
  - Jupyter Keymap
  - Jupyter Notebook Renderes
  - Jupyter Cell Tags
  - Jupyter Slide Show

- **Additional Setup**

1. Make `python` alias

```
echo "alias python=python3" >> ~/.zshrc
source ~/.zshrc
```
2. Deactivate the `base` environment by default when opening Terminal by running this command:

```
conda config --set auto_activate_base false
```
3. Create aliases to shorten the commands

```
echo "alias ca='conda activate'" >> ~/.zshrc
echo "alias fixopenssl='export LD_LIBRARY_PATH=/lib/x86_64-linux-gnu:$LD_LIBRARY_PATH'" >> ~/.zshrc
```

## Resources

- [https://github.com/jeffheaton/t81\\_558\\_deep\\_learning/blob/master/install/manual\\_setup3.ipynb](https://github.com/jeffheaton/t81_558_deep_learning/blob/master/install/manual_setup3.ipynb)

- <https://www.youtube.com/watch?v=eId6K8d0v6o&pp=ygUgaG93IHRvIGluc3RhbGwgd3NslG9uIHdpbmRvd3MgMTE%3D>

-S. Fawwaz A. K