

Setting Up VS Code, Jupyter, and R Kernel on macOS

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Step 1: Install Homebrew

```
# Open the Terminal and run the following command to install Homebrew:
/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"

# Follow the on-screen instructions. After installation, add Homebrew to your shell configuration.
# Verify the installation by running:

brew --version
```

Step 2: Install Visual Studio Code

```
# Download and install Visual Studio Code:
# Visit [Visual Studio Code](https://code.visualstudio.com/).
# Download the macOS version and drag it to the Applications folder.

# Add VS Code to the system PATH:
# 1. Open VS Code.
# 2. Press Cmd + Shift + P, type "Shell Command: Install 'code' command in PATH", and press Enter.
```

Step 3: Install Python and Jupyter

```
# Check if Python is installed:
python3 --version

# If Python is not installed, install it using Homebrew:
brew install python

# Install Jupyter Notebook and JupyterLab:
pip install notebook jupyterlab
```

Step 4: Install the Jupyter Notebook Extension in VS Code

```
# Open Visual Studio Code:  
# 1. Press Cmd + Shift + X to open the Extensions view.  
# 2. Search for "Jupyter" in the Extensions Marketplace.  
# 3. Install the extension by Microsoft.
```

Step 5: Install IRkernel for Jupyter

```
# Open R (via RStudio, R GUI, or Terminal) and run the following commands:  
  
# Install the IRkernel package:  
install.packages('IRkernel')  
  
# Register the R kernel in Jupyter:  
IRkernel::installspec(user = TRUE) # Registers R globally
```

Step 6: Verify R Kernel in Jupyter

```
# Open Jupyter Notebook and check if the R kernel is available:  
jupyter notebook  
  
# In the Jupyter interface, ensure "R" is listed as an available kernel.
```

Step 7: Run Jupyter Notebooks in VS Code

```
# Open Visual Studio Code:  
# 1. Open or create a .ipynb file.  
# 2. Select the "R" kernel from the kernel selector at the top-right.
```

Now you are all set to use Jupyter Notebooks with the R kernel inside Visual Studio Code on macOS!