Python Virtual Environment

# Setup

* Open a bash terminal in Mac OS
* Change the prompt if necessary:  
  + export PS1="$ "
* Create virtual environment named em\_ml:  
  + python3 -m venv em\_ml
* Activate the virtual environment:  
  + source em\_ml/bin/activate
* You will notice the prompt has changed:

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* Instead of installing packages individually, pip allows you to declare all dependencies in a [Requirements File](https://pip.pypa.io/en/latest/user_guide/#requirements-files). For example, you could create a requirements.txt file containing:  
    
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* Install the python environment with the following command:  
  + python3 -m pip install -r requirements.txt
* Manually add the kernel for the environment in the following way:  
  + python3 -m ipykernel install --user --name em\_ml --display-name "Python (em\_ml)"
* You will receive a message to say it’s been installed:  
    
  Installed kernelspec em\_ml in /Users/alexeimarcilio/Library/Jupyter/kernels/em\_ml
* Run jupyter notebook:  
  + When it opens select “New” and you will see that environment is available:  
      
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* No within the new notebook check that the package versions are correct. You will recall above that we have pandas 1.1.2 in the requirements.txt file. Let’s see if it matches:  
  + Import pandas as pd and run the version method to check the version:  
      
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  + Voila, it matches, we are all good.
* Now to get started with the environment:  
  + Open a terminal
  + Make sure all default environments are deactivated (twice):  
    - conda deactivate
    - conda deactivate
  + Activate the environment:  
    - source em\_ml/bin/activate
  + Go to the folder with your current project:  
    - cd Desktop/Courses/Emeritus-Machine/
  + Run jupyter notebook
  + Create a new notebook by selecting the correct environment:

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