Computing Environment

Machine Learning Practice

Compute Server

- This semester, we are using Jupyter Hub set up based on the Nautilus distributed supercomputer
  - Key python packages already installed; others can be installed on the fly
  - Code and data will be available in your own Jupyter Lab instances
- You are also free configure your own laptop / desktop machine and use it
  - Class data / code can be copied from your Jupyter Lab instance

Compute Server: Access

Access to our Jupyter Hub set up:

- https://jupyter.symbiotic-computing.org
- Authentication:
  - Select University of Oklahoma
  - This will take you to the OU single sign on page, where you can enter your standard OU credentials
- Use the “Stack Scikit-Learn” environment

Course Jupyter Hub

- When you start the Stack Scikit-Learn, you are creating a virtual machine instance on the Nautilus distributed supercomputer
  - This can take some time to create - be patient!
- This instance is a proper virtual machine: it has a variety of resources (including private storage)
- Your storage space is persistent (it will continue to exist after you shut down your VM)
- The VM will continue to run as long as you are active. If there is no activity for a while, then the machine will be terminated at some point
- Always make sure to shut down your VM when you are done!

Setting up Your Own Server

- Python 3.10+
- Packages include:
  - Scikit-learn
  - Numpy
  - Pandas
  - Jupyter (lab is nicer than notebook)

- If you need help with this, let's discuss on Slack

Videos Moving Forward

- Most of the videos have been created in the last two years
- Some reference our old jupyter lab servers (mlserver.cs.ou.edu or ondemand.oscer.ou.edu)
  - It is safe to ignore this
  - Instead, use our Jupyter Hub!

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