Setting Up

Install Matlab

Matlab is available for free to Duke students. Go to the Matlab at Duke page, log-in and follow the instructions to download and install Matlab for your operating system. We will use the latest version of Matlab. At the time of writing that is Matlab R2019a. The lecture notes were written to reflect the functions available at the R2019a version. If your Matlab is older than R2019a, you <u>must</u> install the newest version.

During the initial steps of the installation procedure, and after verifying your student information, Matlab will ask you to "Select products to install". At this point, I recommend selecting `MATLAB 9.5` and `Econometrics Toolbox`, while leaving everything else uninstalled. If you eventually need to use some other package, then Matlab will give you instructions on how to download it, this saves a lot of space since Matlab packages are huge.

General Comments about Matlab

Why learn Matlab?

- Easy to learn
- Built-in IDE (integrated development environment)
- Built-in packages
- Good debugging tools
- Good documentation
- Large scientific community:
    - Matlab is used in many universities
    - Senior economics faculty uses it
- Coding time is smaller than compared to lower level languages (C, C++)
- Fast for numerical computations (specialized to deal with computations)
- Great library for plotting

Why not learn Matlab?

- Matlab is not free (meaning fewer companies outside academia use it compared to other languages)
- Other programming languages are more used in the industry (R, Python, C++)
- Closed source: you need to trust Matlab's algorithms
- Not good at dealing with huge data sets
- Not good at dealing with mixed data

References

- Installing Matlab for Duke students
- Comparing Matlab to Python
- Previous iterations of this course