

Using Specialized Software on BlueHive

Department of Political Science
University of Rochester

Overview

- ▶ Software with/without GUIs
- ▶ MATE Terminal
- ▶ Software Modules
- ▶ Combining Software

BlueHive Software

- ▶ For a complete list of software running on BlueHive, see <https://info.circ.rochester.edu/#BlueHive/Software>
- ▶ Using FastX, software with a graphical user interface (GUI) can be launched directly from the *Applications* menu
 - E.g., RStudio, Stata, Matlab, Mathematica
- ▶ Software without GUIs must be launched from a Terminal window

MATE Terminal

- ▶ MATE is the desktop environment used to interact with BlueHive
- ▶ To open a Terminal window, go to *Applications > System Tools > MATE Terminal*
- ▶ The Terminal provides access to Unix/Linux Command Line tools—in particular, loading software modules

Software Modules

- ▶ Environment modules allow users to modify their sessions
- ▶ Specifically, software modules give convenient access to particular versions of software packages (and dependencies)
 - The BlueHive software list referenced above details all available software modules
- ▶ To load a module, type: `module load [module name]`
 - E.g., `module load matlab/r2020a` loads Matlab version R2020a
- ▶ Once loaded, module executables become available
 - E.g., typing `matlab` launches a Matlab R2020a session
- ▶ For a list of other useful module commands, see info.circ.rochester.edu/#BlueHive/Using_the_Command_Line/#modules-and-software

Combining Software

- ▶ It's important to load all desired software modules at the start of any BlueHive session
- ▶ Furthermore, to interface with other loaded modules, software with GUIs should be launched from the Terminal rather than from the *Applications* menu
 - E.g., in order to access Gambit (game theory) tools and Knitro (optimization) tools from Matlab, type:

```
module load gambit/15.1.1
module load knitro/12.0.0
module load matlab/r2020a
matlab
```
 - This launches a GUI Matlab R2020a session with access to Gambit and Knitro