

# Using MATLAB on Stanford FarmShare

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Every campus workstation will have a version of MATLAB installed on it (currently R2017b) which runs out of the box, but let's say you want to access MATLAB from your own laptop. Fortunately, we can login to Stanford's **rice** clusters (part of FarmShare) using **ssh** and still use MATLAB; unfortunately, the instructions for doing so aren't very transparent, so hopefully this document will help clarify. If you find any errors, [please let me know!](#)

In order to use the MATLAB GUI, we need to include something called X Window or **X11 forwarding**, which is a special display software that is required for UNIX/Linux applications. The way we perform X11 forwarding differs depending on the OS, and though we prescribe a specific method here, if you already have a working implementation, feel free to stick with it.

## Mac OS

To obtain a X11 server, we will install XQuartz first from: <https://www.xquartz.org/>. Opening the installer and following the instructions should install XQuartz into the *Applications > Utilities* folder. Make sure it installed properly and is up and running before you connect to rice. When that's done, open a Terminal window and type:

```
ssh -X <suid>@rice.stanford.edu
```

where the **-X** enables X11 forwarding. Enter your password and 2-step authentication code, and then type the following commands to load and run MATLAB with (hopefully) a graphical window!

```
module load matlab
matlab
```

## Windows PC

We recommend using the SSH client MobaXTerm, which includes X11 forwarding. First, visit the website at: <http://mobaxterm.mobatek.net/>, then click "GET MOBAXTERM NOW!" followed by "Download now" under the Free version. Finally, click on the link "MobaXterm Home Edition (Installer edition)" and follow the installation instructions to get everything set up.

Now, open the MobaXterm application, and you should find a large button in the middle saying "Start local terminal." Click that, and type the above **ssh** command *without the -X flag*. You will need to provide the same credentials and type the same two commands as above to load MATLAB.

## Linux

Since X11 is the native display technology on UNIX and Linux systems, everything should already be installed. The procedure to login to FarmShare and load the software is the same as those for Mac OS.