

Running Excel 207 on PCs (BRB 4th Floor Lab)

Neural Net Lab

Login Review:

- (1) Press <Ctrl>+<Alt>+ to bring up login prompt
- (2) Type in your UT EID and password
- (3) Select 'Austin' as the network (if the option appears)

Quick review on how to download files needed for the lab

- (1) Open a browser such as **Internet Explorer** or **Mozilla Firefox**.
- (2) Go to the class website at <http://laits.utexas.edu/compeco/Courses/index392.html>
- (3) Find the lab of interest (organized by date) in the program archive table on the website. The third column contains the necessary Excel files, and have file extension “.xls” or “.xlsx”
- (4) Download the files in the code column by right-clicking on the file name and choosing “Save Link As...” (Firefox) or “Save Target As...” (Internet Explorer). Left-clicking on the code links will open the text in the browser, but will not download the file. Make sure to note where you saved the file (e.g. Desktop, My Documents, etc.).

Running Excel on PCs

- (1) To open **MS Excel** go to the **Start Menu** → **Programs** and choose **Microsoft Office** → **Excel**
- (2) To open an Excel file, in Excel go to **File** → **Open**, then navigate to the file you wish to open

Ending a Session

- (1) Click on the <START> button on the bottom leftmost portion of the screen
- (2) Click “Logout”
- (3) NOTE: be sure to remove any CDs before logging out, and be sure to take any removable media (e.g. thumb drives) with you.

Lab Specific Notes

- (1) To open the **breedlov.xls** file from MS Excel, left click the “Office Button” on the top left of your menu bar in the Excel window. Click Open and navigate to your file location by clicking on Desktop or My Documents on the left panel and/or by double clicking on the relevant folder(s) in the window the pops up. Highlight breedlov.xls and click OK.
- (2) The Solver application should be under the “Data” menu on the Ribbon. Click on Data (the fourth option on the menu part at the top of the Excel window). Under the Data tab you should see Solver on the top, in the extreme right. If you do not see Solver, follow the steps mentioned below:
 1. Left click the “Office” button. At the bottom of the pull-down menu, click on Excel Options
 2. On the left panel of the window that opens, click on Add-Ins (the seventh option from the top)
 3. On the right (main) panel that opens, click on the **Go** button at the bottom next to **Manage Excel Add-ins**
 4. Make sure the Solver Add-In is checked
 5. Click OK. This will install the Solver Add-in.
- (3) Click on Solver
 1. Check whether all options are correct:
 - “Target Cell” is set to the cell next to “Norm ||.||” (Currently set to Cell C15)
 - “Min” is selected (to minimize the norm, which is the error of estimation)
 - Values of Weights (for w11, w12, etc., and theta0 through theta2) are selected for “Changing Cells” (Currently Cells D5:D12)
These ensure that you are telling the solver to choose the values of weights so as to minimize the sum of squared errors in the estimation (C15).
 2. Click “Solve” to solve the neural net model. You might need to ask Solver to continue if Excel warns you that the iteration limit was reached

3. Check the results: the cells you selected (D5:D12) contain the solutions. The predictions for Ford stocks are made using these values (see cells C36, C41)
4. Try solving the model with different initial guesses. Compare the value of the norm: whichever gives a smaller norm is a candidate for the global optimum. Compare the predictions obtained by the new estimation.
5. You may modify the original model by the specification of the squasher function (enters the definition of a) or using another definition of the estimation error to be minimized. You may bring in your own data to estimate other parameters and make predictions about other variables
6. If necessary, use the **Options** in the Solver dialog box to control the number of iterations, precisions, convergence tolerance, and data scaling.