Documenting Your Matlab Work

Much of our work will be demonstrated using Matlab. It will be convenient to be able to publish that work in LaTeX, then you will be able to email me your files in PDF.

To look at an example, we will publish and export the example of the Hebbian rule that was on our class website. Download it and open it with the editor (the file is `ExampleWriteUp.m`).

- Using double percent signs `%%`, separates the document into sections that Matlab calls *cells*. Dividing your work this way gives you options that you normally would not have (like we can execute code in only particular cells instead of the whole M-file).

- You should end a cell particularly after plotting- Plots are inserted in between cells when we publish our work.

- Look to see how Matlab puts together comments- We can even include LaTeX commands (We have a table in the first section).

- In the command window, type

  `publish('ExampleWriteUp.m','latex');`

  You should find a folder marked `html`, and inside of the that, a LaTeX file. Use `TexMaker` to edit the file (if you haven't done so already, let's put the TexMaker icon in your toolbar).

- Before you open the file, be sure that your TexMaker options are set: Go to `Options`, then `Configure TexMaker`. Be sure the following lines are set correctly:

  ```
  PS Viewer:     kghostview %.ps
  Pdf Viewer:    acroread %.pdf
  ```

- To get a PDF file with your work on it, go to `Tools`, then `PS->PDF`. To view the PDF file, select the Acrobat key (the button with the red curve).

This PDF file is the file to send to me. In fact, let's update the TeX file to add a function. At Line 164, add the following:

```
\section*{Appendix}

This appendix includes the function file we computed in class.

\begin{verbatim}

function [pA,k]=pinv2(A,p)
%
%
put the code here...


\end{verbatim}
```