For Mac OS:

Link to TensorFlow page: https://www.tensorflow.org/install/install_mac
Link to Keras page: https://keras.io/
Link to Anaconda download site: https://www.continuum.io/

TensorFlow provides several options for the initial installation. If you meet the requirements on the page for running it with GPU support, it is recommended to do this in order to run simulations in less time in the future. I am unable to verify the installation as I do not have GPU support, but the instructions are similar and can be found on the TensorFlow page. Otherwise, any of the methods from the TensorFlow site can be selected. I ran into trouble trying their recommended method of virtualenv, so personally I used the Anaconda method which I will describe here. First, you should go to the Anaconda download site (link above) and install the appropriate version there (depending on your Python version preferences if you have any, or either should work just fine). After this, the command "conda create -n tensorflow" should be used in a terminal window (quotes are used to signify the commands to be input; the terminal can be accessed by command+spacebar and typing terminal if you are not familiar with it). The next command is "source activate tensorflow". You will likely have to perform this sourcing command each time you open up a new terminal window that you plan to use TensorFlow in. After this, it will depend on the version of Python you are using (this should match up with the version of Anaconda you installed) and whether or not you have GPU support. Python versions 3.4-3.6 have the following corresponding command: "pip install --ignore-installed --upgrade \ https://storage.googleapis.com/tensorflow/mac/cpu/tensorflow-1.2.0-py3-none-any.whl". If there are any errors with using the pip command, you may need to install it with "sudo easy_install pip". With a normal installation, "cd tensorflow" can be used to navigate to the tensorflow folder when necessary (both during installation and later on). Finally, to install Keras, do the above cd command and use "sudo pip install keras". Many of the Keras dependencies listed on the website are automatically installed, but "pip search" followed by the name can be used to find the appropriate file names and then use "pip install" followed by that name to install them. At this point, you should be able to perform the 'Run a short TensorFlow program' section from the TensorFlow page with no problems. One issue may pop up that you should be aware of: instead of just printing Hello, TensorFlow! as predicted on the website, you may say b'Hello, TensorFlow!'. This is just indicating that a byte was printed and is not a significant error that will affect anything else you are working on.

Link to TensorFlow getting started examples: https://www.tensorflow.org/get_started/get_started

This link will take you to a page with some simple TensorFlow examples. You should pretty much be able to work your way down the page and eventually run through some Linear Regression problems; these are the first cases of machine learning that you will gain some experience with before moving on to more advanced uses.

Link to PyCharm install page: https://www.jetbrains.com/pycharm/download/#section=mac

PyCharm is one of several possible IDE's that can be used with TensorFlow. You do not necessarily have to use this one, but it is recommended to use one in general - trying to edit files directly in the terminal is much different than any other programming you may have done previously, while an IDE should be pretty similar once you experiment a little bit. Additionally, you should be able to save and execute programs directly from the IDE, which is convenient for anything that you want to run through multiple times especially. The download link and installation instructions are both located on the PyCharm link above, and it should be a relatively simple process. The fully free community version should be acceptable for anything you would need for this course. When creating a new project, make sure to select an appropriate interpreter that works with your TensorFlow/Anaconda/Python versions. In my case, using CPU TensorFlow and 3.6 Python with compatible Anaconda, I select the '3.6.1 at ~/anaconda3/bin/python' option.