CITS5508 Machine Learning
Semester 1, 2024
Lab Sheet 1
(Not assessed)

1 Get the software working

The first lab task for this week is to install all the necessary software on your laptop. See the section "Software" in LMS for helpful information regarding software installation. Please note the provided instructions are only guides to support you, but you are responsible for the software installation. We are not responsible for issues with students' computers or software.

2 Try some Jupyter examples

Once the software is installed correctly, your next task is to learn and experiment with the Jupyter Notebook examples in Chapters 1, 2 and 3 of the textbook on your own computer environment. All the Python code examples from the book *Hands-On Machine Learning with Scikit-Learn & TensorFlow* can be downloaded from https://github.com/ageron/handson-ml2 (second version) or https://github.com/ageron/handson-ml3 (third version).

You need to download the notebooks and run them with the environment cits5508-2024 you created during the software installation (assuming you followed this option). Check all codes are running properly and that you do not have package issues. You may choose to install any additional package a specific notebook from the textbook requires.

You can start running the file sample sample.ipynb and see if you understand the commands and read the tips about how to present your results in a meaningful and clear way (will be necessary for your assignment). Several resources are available on the Web to learn how to format Jupyter Notebooks properly - you will need to be familiar with Juoyter Notebboks to prepare your assignment. You can search for documentation on the Web, and some useful links are available in the folder "Software" in your LMS.

3 Implement a simple learning model

In this task, you will implement the simple learning model discussed in class for a synthetic data set. Look at the provided instructions in the file Simple Learning Model.ipynb.