UFCFVQ-15-M Programming for Data Science

Week 1 Worksheet

**Aims and Objectives**

1. Learn how to access UWE’s GitLab and
2. Access learning materials through Blackboard
3. Familiarise yourself with Jupyter Notebooks
4. Create your own GIT repository for adding version control to your weekly worksheet tasks

**Introductory Tasks**

* Learning how to use GIT is vital for this module (you will be expected to submit your assignment work this way) and a key skill for any developer and Data Scientist.
  + A GIT tutorial has been created to explain the basics of using GIT (available at the following web address: <http://www.cems.uwe.ac.uk/~di2-wyatt/FVQ/git_tutorial/>)
  + You should work through this tutorial carefully. You will need to pair up with someone to complete some of the later activities in the tutorial
* Download the ***Week 1 Jupyter Notebook*** to your local drive. The Notebook can be found on Blackboard (in Learning Materials >> Week 1 – Getting Started)
  + Once you have downloaded this Notebook, open the *Anaconda Navigator* and launch the *Jupyter Notebook* application
  + Open the downloaded notebook in the application and follow the instructions contained within the Notebook to familiarise yourself with how to Jupyter Notebooks work
* Consider creating a special GIT repository for your workshop activities to add some version control to your progress through the workshop tasks. (GOOD PRACTISE)

**Optional Extra Tasks**

* You might also try editing and running Python code within Visual Studio Code
  + To ensure the environment is setup correctly, you should always run VS Code from the Anaconda Navigator
  + Try creating a new project and copying the code from the ***Week 1 Jupyter Notebook***, i.e., just the runnable cells
* An alternative online approach to running Jupyter Notebooks is through *Google Colab* (<https://colab.research.google.com>). You could investigate the following:
  + how to upload a Jupyter Notebook into Google Colab
  + how to execute runnable cells

NOTE: you may need to set-up a google account to access this resource

**Advanced Tasks**

* If you feel comfortable with basic Python syntax, you might try to create your own empty Jupyter Notebook. Look at the Jupyter documentation for information about its Markdown language and experiment with creating both Markdown cells and Code cells.
* If you feel comfortable with GIT, you might wish to practise more advanced skills such as branching and merging. Find a peer who is willing to experiment with you.
* The GitLab system you will be using for your assignment work is managed by UWE, you might also want to create a GitHub account and repository for recording your progress.

**Assessment Details**

* There are no assessment elements to be completed this week

**Useful Links and Resources**

* Getting started with Visual Studio Code: <https://code.visualstudio.com/docs/introvideos/basics>
* Getting Started with Python in VS Code: <https://code.visualstudio.com/docs/python/python-tutorial>
* Anaconda Installation and User Guide: <https://docs.anaconda.com/anaconda/>
* Jupyter Notebook Documentation: <https://jupyter-notebook.readthedocs.io/en/stable/>
* GIT Documentation: <https://git-scm.com/doc>
* Extensive GIT tutorial: <https://www.vogella.com/tutorials/Git/article.html>
* Git Essentials Training Lynda.com course: <https://www.lynda.com/Git-tutorials/Git-Essential-Training-Basics-REVISION-2019-Q1/5030978-2.html>
* Google Colab: <https://colab.research.google.com>