Data Science Toolbox Formative Coursework 0: Data Review and group work primer

Deadline: Thursday 12:00 Week 3

Group Project description

You will **choose an application domain** that your group will work with during Assessment 0-1.

This first challenge has the following purposes:

1. To give you experience with the assessment used,
2. To enable you to explore **collaborative working**,
3. To give you additional **experience with programming**.

Remember that this is a **formative assessment**, that is, it does not contribute to your final mark. You should however engage with it as if it were assessed.

Your challenge is to perform a literature review of the resources for helping you do data science in **your chosen application domain**. Think about the following topics:

- What are the broad types of data?
- What are the main types of resource?
- What type of problems can the resources solve?
- Are there any generic data science resources that might be applicable? In what sense are they applicable?
- How might the approach be compared to other approaches, and/or applied across different datasets?
- How is the experience of sharing code via GitHub limiting, and/or enabling?

You group should:

- Find a range of books, websites and other resources that **provide code** that is run on cyber security data;
- Download and **run the examples** you find;
- Make **modifications** to the code to create **your groups' own** visualisations of the data they are designed to analyse;
- Combine them into a **report** that structures selected content logically.

It may be natural to use multiple programming languages. It is likely that your team has some prior experience with coding, so consider continuing an analysis to obtain additional insight.

Individual reflection description

- Discuss the limitations of your literature search.
- Discuss the mathematical content of at least one resource.
- Reflect on where your own comfort zone is.

- Reflect on what additional knowledge is needed to utilise these resources more effectively.
- Reflect on collaborative coding practice, and what you might change for a smoother experience next time.