Background and motivation.

I selected this course because I am interested in exploring how data science can be applied across various fields and domains, and most importantly within environmental sciences. I aim to gain expertise in data acquisition, for example how to find a rich dataset that is easy to work with and to become more familiar with data preparation and wrangling. This includes working with different data formats and learning how data can be cleaned and organized efficiently. All of the above should be achieved in a way that allows me to clearly understand and explain the results to an audience with little or no prior experience in data science, while still ensuring they can meaningfully interpret the findings.

I aim to develop the necessary skills to efficiently search for documentation related to specific commands, as well as identify appropriate data sources for a given project. I also expect to expand my knowledge of data preparation and wrangling, and to learn how to visualize results in a meaningful and effective way.

First Goal: Data Acquisition and Wrangling
By the end of the course, I will be able to effectively collect data from different data sources but also to bring them into a format that is easy to work with, c regarding the project. Currently I have a basic knowledge of data acquisition and wrangling. I am looking forward to reducing the time required to search for data, load it, and preprocess it for analysis. Regarding data wrangling I aim to learn how to bring data into a consistent, clean, and usable format based on the needs of each project. The methodology for achieving this goal will be python, numpy, pandas and i will produce a jupyter notebook showing a complete data wrangling pipeline.

Second Goal: Data Information
By the end of the course, I will be more familiar with libraries for data visualization such as GeoDA depending on the selected project. Right now I am familiar with making plots and maps with matplotlib. I am looking forward to learning how to effectively use additional libraries, particularly for projects involving spatial data. I will use python, numpy, pandas, matplotlib, GeoDa. The final output will include different visualizations in a Jupyter Notebook as well as, in the final portfolio.

Third Goal: Data in Social Aspects
By the end of the course, I will be able to communicate the results clearly and effectively to a non-technical audience. Right now I can create plots and maps, but I assume that some related field knowledge comes from the reader. I am looking forward to making plots, figures and examples that are intuitive to a broader audience. I will focus on simplifying concepts and using clear visual explanations supported by practical examples. The output will be either a poster or a story map, included in my final portfolio