**Earth-AI Tech Quiz**

1. **Please write a piece of python code (using pandas and other packages as you see fit) that does the following:**
2. Reading in four numerical inputs: lat\_min, lat\_max, long\_min, long\_max.

They are the minimal and maximal latitudes and longitudes (WGS 84) that defines a “rectangular” area on the Earth surface.

1. Printing out the area in km^2 of the input “rectangle”.
2. Searching through the attached file (AU\_project\_coords.csv). The file contains a list of similar “rectangular” areas defined by four numerical numbers.
3. Returning the list of areas in the AU\_project\_coords.csv file (only the “analysis\_area” names/strings) that overlap with the input area.
4. **Please design/choose a performance metric (a single numerical quantity used to optimize the machine learning models) for each of the following binary classification problems.**
5. A binary classifier that will be used by the police to predict from the face of a passenger in the airport whether he or she is a terrorist.
6. A binary classifier that will be used by a mineral exploration company to predict from the satellite images whether a remote location in outback Australia contains a valuable core body.