Thor,

This sounds like an interesting and appropriate final project, please proceed. Do you intend to deliver a parameterized script tool? Keep in mind that your script should be flexible enough to work with other data sources in the same / a similar format. Try to avoid hard-coding feature class inputs and field names. A script tool would most easily accomplish this. Depending on how your coding process goes, this would also be an excellent opportunity to experiment with the data driven pages capability of ArcGIS Pro to create a map-book of the output.

***Final Project Proposal***

**Mapping ecological water quality since 1990**

1. For each of the three categories coastal waters, lakes, and streams, I intend to produce a map for each year since 1990 showing the ecological water quality of each water body within that category.
   1. That is, using the 2019 identification of water bodies from the Danish Environmental Protection Agency (the relevant WFS layer in [this GIS dataset](http://wfs2-miljoegis.mim.dk/np2_2016/ows?service=WFS&version=2.0.0&request=Getcapabilities)), I will fit data on biological indicators for water quality (point observations with coordinates from the [surface water database](https://odaforalle.au.dk/login.aspx)) with the vectors and polygons they are located in.
   2. Furthermore, for each year I will calculate the kilometers of streams and square meters of lakes and coastal waters (within the one nautical mile limit) within each water quality classes (from bad to high quality based on the biological indicator)
2. A script automates the comprehensive procedure that I will apply for each of the 30 years. Furthermore, I will only have once set up the symbology with an appropriate color range for the quality classes and save it as a layer file (.lyr) to *ApplySymbologyFromLayer*.
3. Deliverables: A zip file with the script, layer file and necessary datasets to run it with ease. To illustrate the development over time, I intend to clip the illustrations together as a short animation for a GitHub page.