

### CLARIFICATION QUESTIONS

Please ask any question related to this assignment in the class or in the Canvas Forum. To be fair to everyone, it is best to ask assignment question openly rather than in email. Do not share your code with anyone. Do not post your code online. Do not ask for help in any public discussion forum or online website. You can search over the internet and read books. Let me know if you find any error in the assignment question as soon as possible. DO NOT POST/SHARE OR DESCRIBE YOUR OUTPUT TO ANY OTHER STUDENT. You can always ask questions about the methods, definitions or approaches to solve a question. **DO NOT ASK ME WHETHER MY OUTPUT LOOKS CORRECT.**

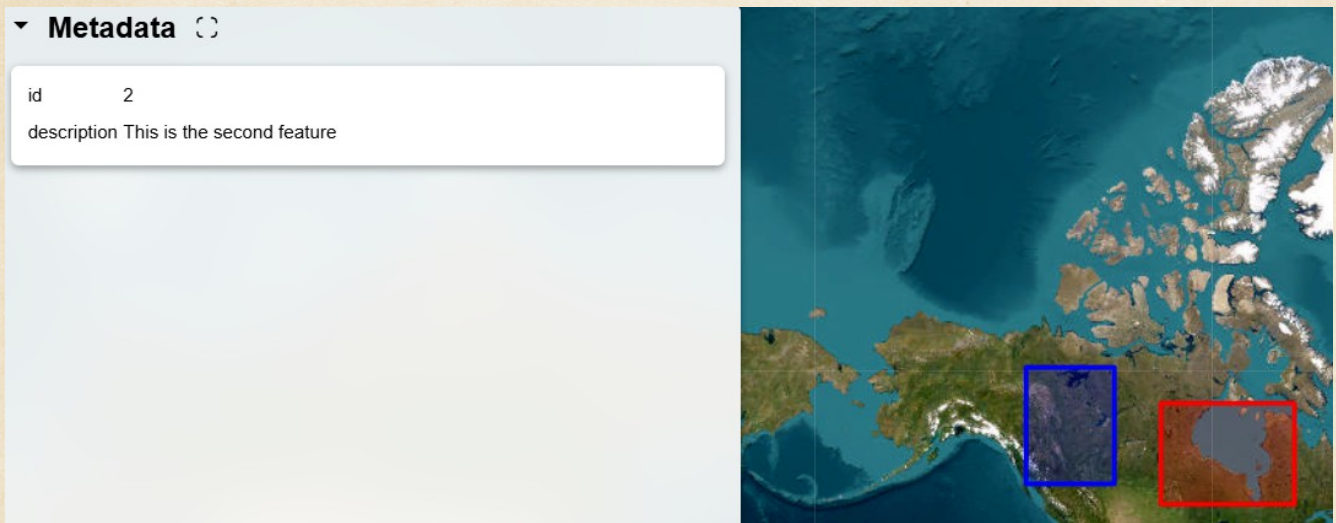
## ASSIGNMENT 5

This assignment MUST be completed using the VGA framework introduced in the lab. Use of AI-generated code allowed.

**What to submit?** Please submit everything in a zip file. Make sure that running the local server at the index.html directory generates the desired output (once the data folder is selected).

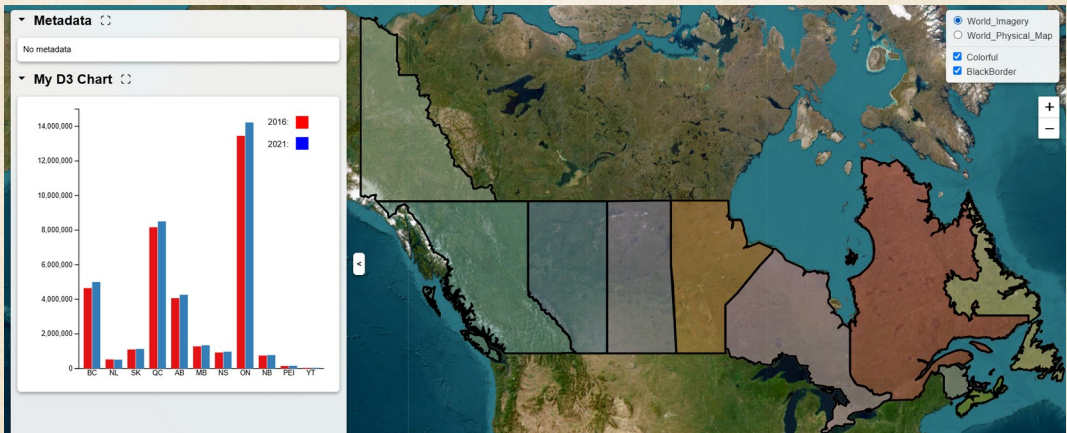
### Q1. INTERACTIVE MAP ON VGA FRAMEWORK , MARK : 100

Read the slides (Framework.pptx in Canvas) and complete all the tasks 1-15 discussed in the Tutorial, which will help you to complete this question. You are recommended to ask question to Arman (arman.heydari@usask.ca) if you need help to complete this question. Make sure that you can see the following image when you complete 15\_wrapping-up-sample-solution (metadata shows up when you click on the squares polygon).



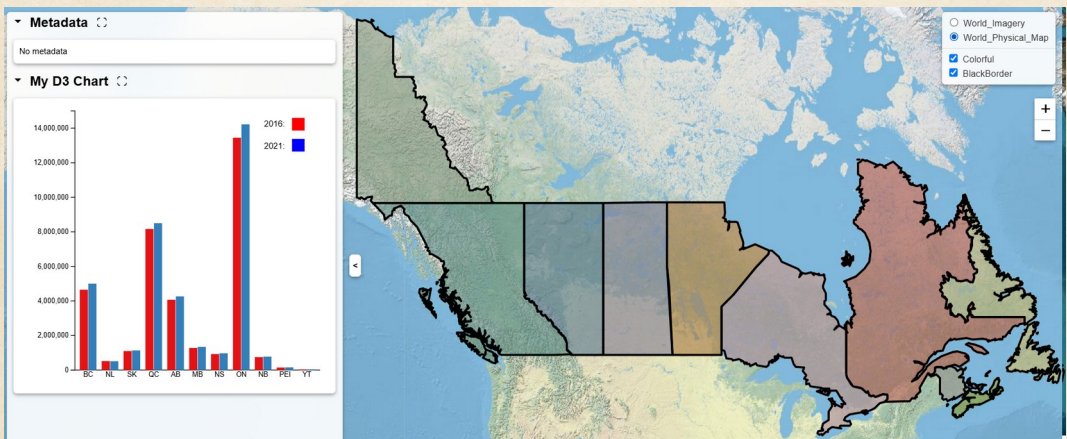


Update the tutorial code 15\_wrapping-up-sample-solution to generate the following visualization. Place the given data CanadaCensus.geojson in the data folder. The chart should show the 2016 and 2021 population data from the CanadaCensus.geojson.

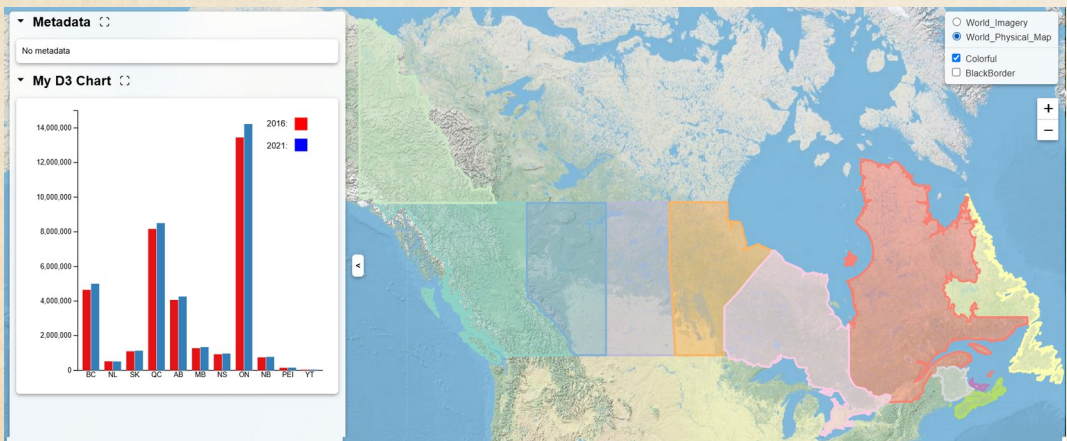


## INTERACTIVE FEATURES

There must be several layers in the visualization as shown below. If we select World\_Physical\_Map, then we see the following.

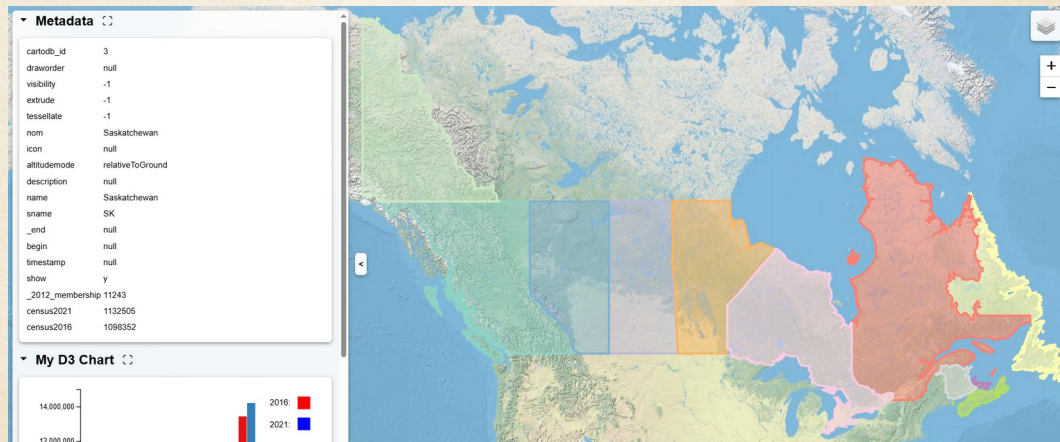


If we deselect BlackBorder, then we see the following.





If we click on a province, the metadata should show all its properties. Here is what we see after selecting Saskatchewan.



If we click on a bar of the bar chart, the metadata should show the corresponding year and value. Here is what we see after clicking on the blue bar of Saskatchewan.

