Progress of Choropleths Project:

* Made a Google Earth Engine app by adapting code from Steve Shirtliffe and Ari
  + <https://code.earthengine.google.com/5f75ca20baf4e2919e81077ddd4dc365>
    - May need Earth Engine account to access
  + Allows user to select a region and will generate a median NDVI layer and coefficient of variance NDVI layer directly on the map
  + Written in JavaScript, but is difficult to use since all commands done on the dataset is done server-side using their own Earth Engine API, while changes to the map itself are done client-side
* Made a Leaflet app in JavaScript
  + <https://git.cs.usask.ca/kcl621/choropleths>
  + Uses NDVI (both med NDVI and cov NDVI) dataset exported from Google Earth Engine
    - Randomly selected an area in Alberta that contains approximately 1 million data points
  + Preprocessing code (processRawData.html) converts data into a 100x100 grid
  + Grid is coloured by the average of NDVI values that are located within each grid element
  + Default colours taken from original code provided by Steve Shirtliffe
    - Additional colour sets also available using d3
  + Currently only one NDVI dataset can be displayed at once on the app

Things to work on:

* Display NDVI dataset as vector lines inside each grid element
  + The angle of the vector would indicate the value of the NDVI average
    - E.g., a horizontal line would be the minimum value and a vertical line would be the maximum value
  + Allows both mNDVI and cNDVI to be displayed at the same time
    - One as colour of grid and the other as the vector line inside
  + Vector lines would only show up at higher zoom levels to limit the amount of clutter on the screen and improve loading performance
* Allow changing on the grid size
  + Would require multiple datasets to be preprocessed, or requires a faster processing algorithm to reduce load time
* Subsetting of the dataset to show a smaller area in higher detail
* Increase overall size of dataset
* Look into alternatives to getting automatic access to Earth Engine’s API so that datasets can be loaded more dynamically