

Peer Review (In Class notes/take away from November 3rd, 2021).

Small group included feedback from: Mohsen Ahmadkhani, Doug Griep, Bryan Runck, and Luke Rosen

- Last Wednesday, we talked about what weather data I currently have (radar data measured in dbz). It was asked what my weather data represents and pointed out wind might be the most helpful since this will affect a plane's velocity. I also realized that the data I do have currently have may not be the most useful, since it is a 2D raster that doesn't convey via altitude where the weather/storms are in the atmosphere since a plane could be at a cursing altitude above certain storm clouds.
 - The topic of how I would integrate the weather and Airspace classification into any ML was broached. The main idea discussed was adding more variables (columns) that recorded the weather and airspace at each point's location (in this scenario airspace would be a Boolean variable, and should feasibly always be true for planes within the corresponding altitude). Do I then add more variables for neighboring weather cells? (since we also care about the weather around the plane not just at its current location).
- A big suggestion to attain initial results was to make new variables that convey the distance between each timestep and inverse the data (so that time or the differences of distance covered via time would be the column headers while the flight became the rows). Then feed this into a Linear regression (since planes tend to travel linearly). This approach doesn't involve the addition of contextual data (weather and airspace) since the goal is to produce an initial result.
- The main topic of the conversation was how I would proceed that evening, which at the time was focused on subsetting my massive ADSB data to a smaller sample (isolate several flights around one Class B airspace (essentially flights around an airport)).
 - This would involve converting my current csv file to point geometries within ArcPro and then selecting points that intersected with the Class B airspace shapefile.