Sportfishingreport.com Project Goals and Outline

Data:

Scraped from sportfishingreport.com

* Date boat returned to landing
* Location – major city where landing is (i.e. LA or SD, NOT which landing)
* Boat name
* Trip type
* Number of anglers on boat
* Catch, # of fish caught by species
* Whether the trip was first or second of the day (relevant for ½ day trips)

Interesting potential external data to join:

* Oceanic conditions, i.e. SST (for longer trip this might be tricky given the logistics of how far boats can go and lack of transparency into actual fishing grounds)
  + SST
  + Salinity
  + Air temperature
  + Wind speed?
  + Biotoxin levels/algal blooms…? (like if there was a red tide or not at the time)

Originally was inspired by yellowtail sportfishing and whether there are increasing catch trends over time.

Can be expanded to other species

**MODEL OF CATCH BASED ON NUM ANGLERS, TRIP TYPE, OCEANIC CONDITIONS?**

**THE TROUBLE IS THAT WE DON’T KNOW WHERE THE FISH ARE AND BOATS HAVE LIMITED RANGE. SO WHEN PEOPLE START TO CATCH A FEW YELLOWTAIL, IS IT UP TO TALENTED CAPTAINS TO FIND FISH, OR IS IT LUCK, OR CAN IT BE PREDICTED?**

Steps:

1. Scrape data
2. Clean data
3. EDA (this will probably be the final product):
   1. Total catch by species for the year
   2. Trends of catch for different fish over the year
   3. COVID-19 impact on sportfishing in 2020 (vs 2019)
4. Can maybe do a few predictive models with both regression and RF, but will most likely asterisk it if I do with the fact that there’s too many ecological/oceanographic conditions missing to be able to put any weight on the prediction. But just to showcase the coding and thinking?

Need a true predictive analysis study for fisheries/ocean stuff…

Topics on marine conservation:

* Fisheries management
  + **Fish wholesale prices on the West Coast predictor? Based on…**
    - **Global catch? Or just local catch?**
    - **Global fishing prices?**
    - **Other possible industry or global indicators to consider?**
* Marine spatial planning
* Ecosystem restoration
* Increasing science literacy to promote conservation and stewardship of natural heritage for future generations
  + Essentially improving literacy and understanding of the importance of conservation

Geospatial analysis

Recreational (or commercial, or both!) fishing access over time – areas that have been closed and opened and closed…

1. Scrape state or federal regulations that open/close access to recreational and commercial fishing (maybe can find on federal/state registrar?)