

Proposal

- ~ 0.5 to 1 page, describing your data sources and how you plan to use them
- (processing, interaction, and presentation).
- You will receive feedback on this proposal until it is approved.

Data Checkpoint & Interactive Presentation Design

- Data Checkpoint:
 - Demonstrate that you are successfully collecting, caching, and storing in a json or html 'cache' all relevant data from your sources.
 - Interactive Presentation Design: ~ 1 page, describing your plans for
 - implementing interactive presentation capabilities, including user options supported and presentation types
 - You will only receive feedback on this checkpoint if something is wrong!
- Demo and final submission
 - A 2-4 minute video demonstrating your project
 - a 1 page report on your programs data and features, and any interesting highlights.
 - the code of your program and underlying data.

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SI 507 - Intermediate Programming
Project 1 Description

My project proposal will look at Oregon Department of Forestry data for fire occurrence points from the year 2000 through 2022. I am interested in looking at the data set, in part because of the increased frequency and intensity of wildfires across the west coast and in my home state. This data is collected and organized by the Oregon Department of Forestry, the main state agency in charge of “protecting, managing, and promoting stewardship of Oregon's forests to enhance environmental, economic, and community sustainability.”¹

API: <https://data.oregon.gov/resource/fbvv-q84y.json>

The data set contains information about the following variables of interest

- What fires fall under jurisdiction of the ODF primary protection agency, or the area of the where the fire occurred by ODF Administrative Fire Protection District and Fire District
- The name of the fire
- The class, or severity of the fire
- Total acres burned.
- Fires caused by a human or lightning,
- General cause of the fire
- specific cause

In particular, I am interested in creating a way to look at the fires based on the cause of fires, the regional concentration of fires, and the frequency of fires by year. I am interested in seeing if there is any relationship between any of these variables over time. This data set information seems relevant as Oregon and the rest of the West Coast experience acute changes due to climate change. Due to population and land mass differences across Oregon counties in the state, I hope to understand the concentration of wildfires and intensity, based on population density throughout the state.

Processing and Interaction:

- In order to implement the graph data structures I will:
 - Use Oregon Counties as a node, to track distance and starting coordinates for wildfires as reported by ODF.

¹ Oregon Department of Forestry, Mission Statement.
<https://www.oregon.gov/odf/aboutodf/Pages/default.aspx>

- Use provided JSON file for ODF data
- Use filtering, sorting, and visualization tools to display the wildfires in accordance to data and year. This will likely be

The following is information about each column category of the data and the description.
Data Source:

https://data.oregon.gov/Natural-Resources/ODF-Fire-Occurrence-Data-2000-2022/fbvw-q84y/about_data

Column Name	Description	Type
Serial	Unique ID in Agency Database	
FireCategory	STAT fires are those where ODF is the primary fire protecting agency	
FireYear	Fire Year	
Area	ODF Administrative Fire Protection Area	
DistrictName	ODF Administrative Fire Protection District	
UnitName	ODF Administrative Fire Protection Unit	
FullFireNumber	Full fire number FireYear-DistrictUnitFireNumber-FiscalYear	

FireName	Fire Name
Size_class	Fire Size Class
EstTotalAcres	Total Acres - Estimated (Please verify)
Protected_Acres	ODF Protected Acres burned
HumanOrLightning	Main Cause (Human or Lightning)
CauseBy	Cause Demographic (who)
GeneralCause	General Cause
SpecificCause	Specific Cause
Cause_Comments	Cause Comments
Lat_DD	Latitude in Decimal Degrees
Long_DD	Longitude in Decimal Degrees
LatLongDD	Lat-Long DD Combo for data.oregon.gov

FO_LandOwnType	Fire Origin Land Ownership Type
TwN	Public Land Survey - Township
Rng	Public Land Survey - Range
Sec	Public Land Survey - Section
Subdiv	Public Land Survey - Section Subdivision
LandmarkLocation	Landmark Location
County	County
RegUseZone	Regulated Use Zone
RegUseRestriction	Regulated Use Restriction Level in Effect
Industrial_Restriction	Industrial Restriction Level in Effect
Ign_DateTime	Ignition Date and Time
ReportDateTime	Report Date and Time

Discover_DateTime	Discover Date and Time
Control_DateTime	Control Date and Time
CreationDate	Record Creation Date and Time
ModifiedDate	Record Modified Date and Time
DistrictCode	ODF Administrative Fire Protection District Code
UnitCode	ODF Administrative Fire Protection Unit Code
DistFireNumber	Original Short Fire Number