**WORKFLOW PROPOSAL ::**

Download (ETL) – done in Python

Separate Python, just to clean up

HTML

Front End

Python Flask App

1. Connect to DB by SQLAlchemy
2. Query the data
3. Convert it in to JSON (API – key to JS – 1st route)
4. Render the raw HTML (2nd route for homepage)

SQL Lite DB (Cleaned)

JavaScript

Driving the HTML dynamically

**DATA EXPLORATION ::**

1. Overview of 40+ years of satellite launches?
   1. X :: years / decades
   2. Y :: counts
2. Plot satellite launch by countries : who has the most satellites (owner column)
   1. X :: country names – radial stacked bar chart
   2. Y :: counts
3. Plot satellite counts vs. users (civil, commercial, military), etc.:
   1. X :: purpose of usage
   2. Y :: the counts
4. Plot satellite counts vs. purpose (technology, communication), etc.:
   1. X :: purpose of usage
   2. Y :: the counts
5. Contractor vs. count:
   1. X :: contractor
   2. Y :: counts
6. Launch site vs. count:
   1. X :: launch site
   2. Y :: counts
7. Leaflet:
   1. Comparing 1970 – 2020 : slider over the map
   2. Choropleth maps (in total) : use the data from #2
8. Build demographic box for each satellite name:
   1. Country of origin, year launch, Mass, Power
   2. Longitude of GEO (degrees), Perigee (km), Apogee (km), Eccentricity, Inclination (degrees), Period (minutes) : this is the time to complete one rotation, Launch Mass (kg.)

Rank: 1, 8, 7, 3, 2