Customizable Analysis and Visualization Tool for COVID Cases

Milestone 5

Team Members

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Faculty Advisor/Client

- Dr. Philip Chan, pkc@cs.fit.edu

Progress Matrix

Task	Completion %	Stian	Sam	Nicole	CJ	To do
1) Continue work on scatter plot	100%	100%	-	-	-	None
2) Operations card update to be more intuitive	80%	-	-	-	80%	
3) Save unique workspaces	0%	-	-	-	-	All
4) Layering plots	80%	80%	-	-	-	Change UI so user can create multiple plots
5) API auto updates for datasets	50%	-	50%	-	-	Convert/append JSON object received from API endpoint to a current CSV
6) Finish Application Feature	100%	-	-	80%	20%	None

Task 1 - Continue work on scatter plot

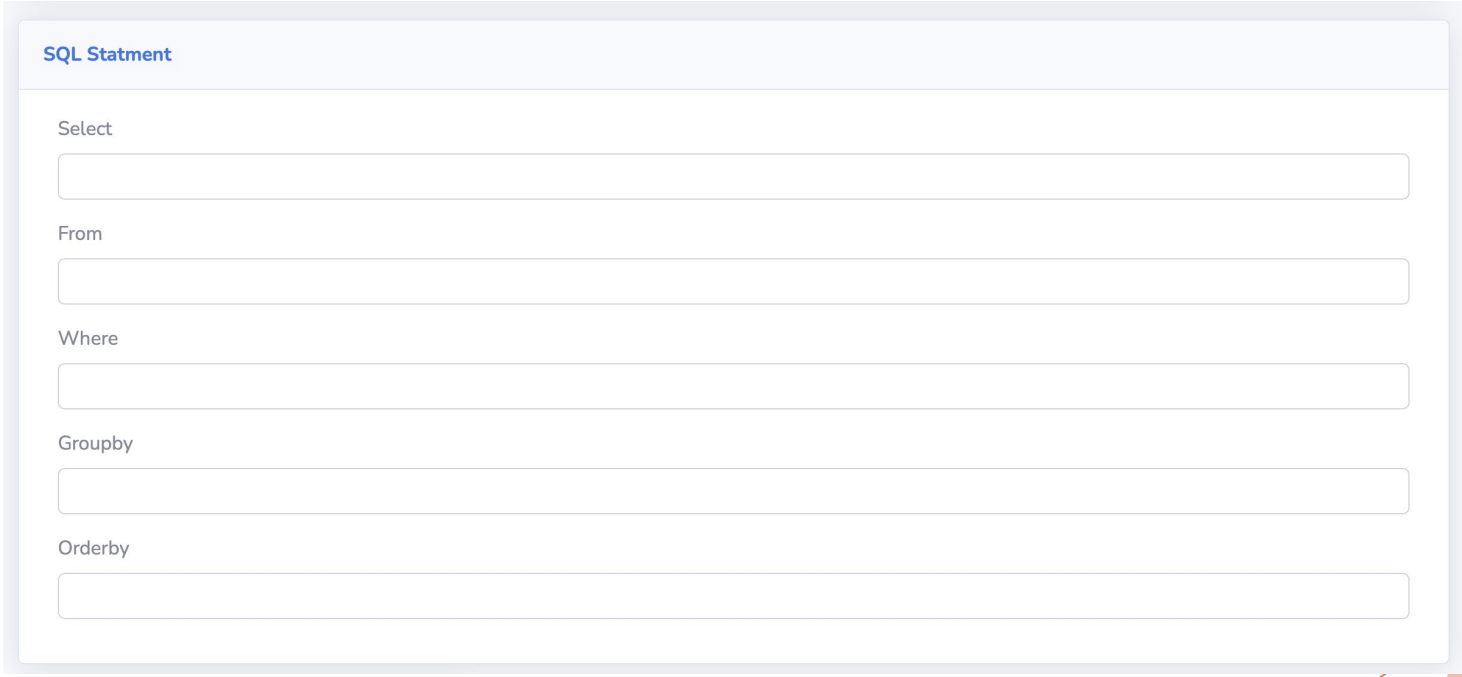
- Finding a good use for the scatter plot and finishing up the plot utility.
- Scatter plot to see if there is a correlation between positivity rate and mobility during the pandemic in Florida and in the USA.
- We also encountered a problem with partial weeks when we were resampling the data.

Demo Task 1

Task 2 - Update Operations Card

- Suggestion by Dr. Chan to use a similar format to SQL for querying and manipulating a dataset
- To move closer to the SQL method, we removed our filters and operations card and replaced them with a single “SQL Query” card
  - Has fields for SELECT, FROM, WHERE, GROUPBY, and ORDERBY
- We found a pandas plugin called “dataframe_sql”
  - Allows us to pass a SQL query statement and it will return a filtered and manipulated dataframe

Visual for Task 2



Task 4 - Layer plots

- Figure out which plots can be layered.

- We can layer pie charts, bar charts, line charts, timelines. We still need to figure out if we can layer scatter plots.

Demo Task 4

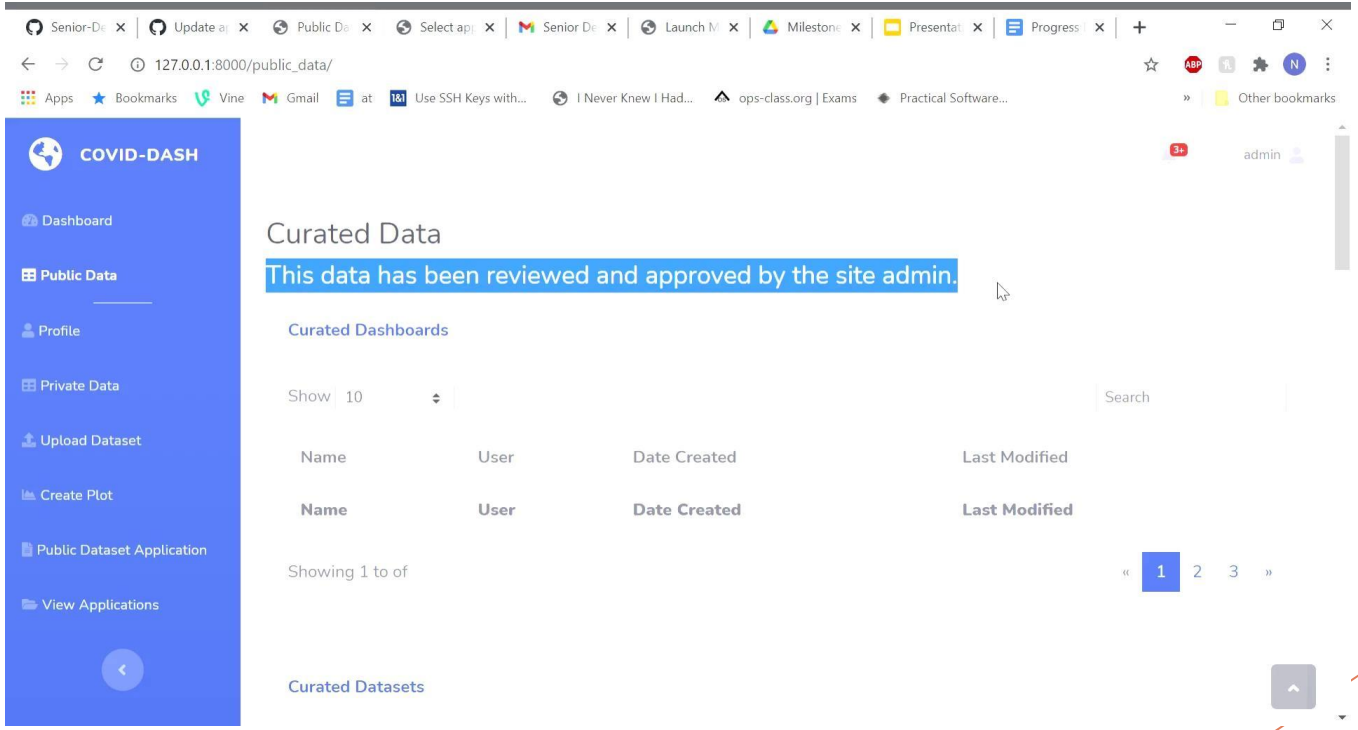
Task 5 - Auto Update Datasets

- User uploads a dataset and sets a URL field that points to an API endpoint
- Then a file is fetched from that endpoint and processed to update the dataset
- The research phase of this task is nearly complete
- Backend implementation will include querying the API endpoint given by the user and converting the returned JSON object to a CSV object
    - Append/Reprocess the dataset
- Frontend changes include changing the “Upload Dataset” page to add a text field for setting the URL that points to an API endpoint

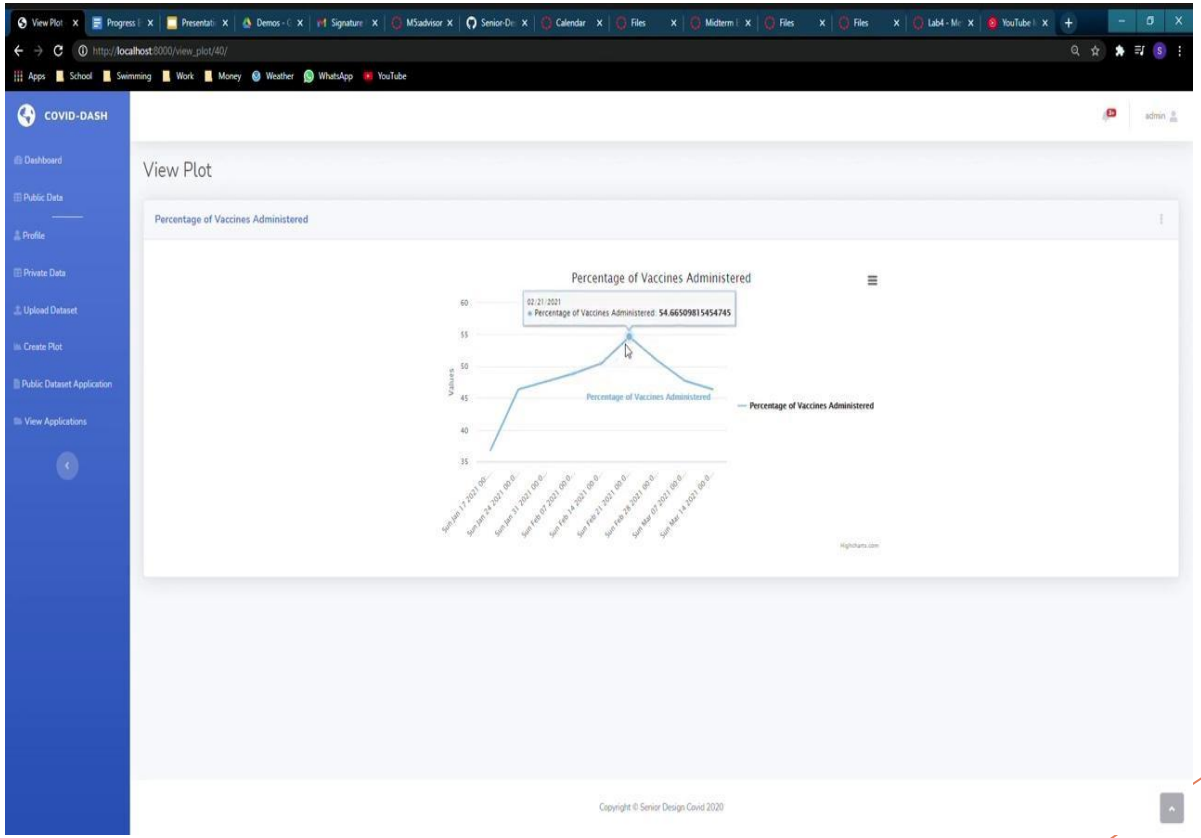
Task 6 - Dataset Application

- Updated public data to include both shared and curated data
  - Shared: Data made public by a user but sent through approval process. *Use at your own risk.*
  - Curated: Data that has been submitted via an application and approved by the admin. *Verified, Safe*

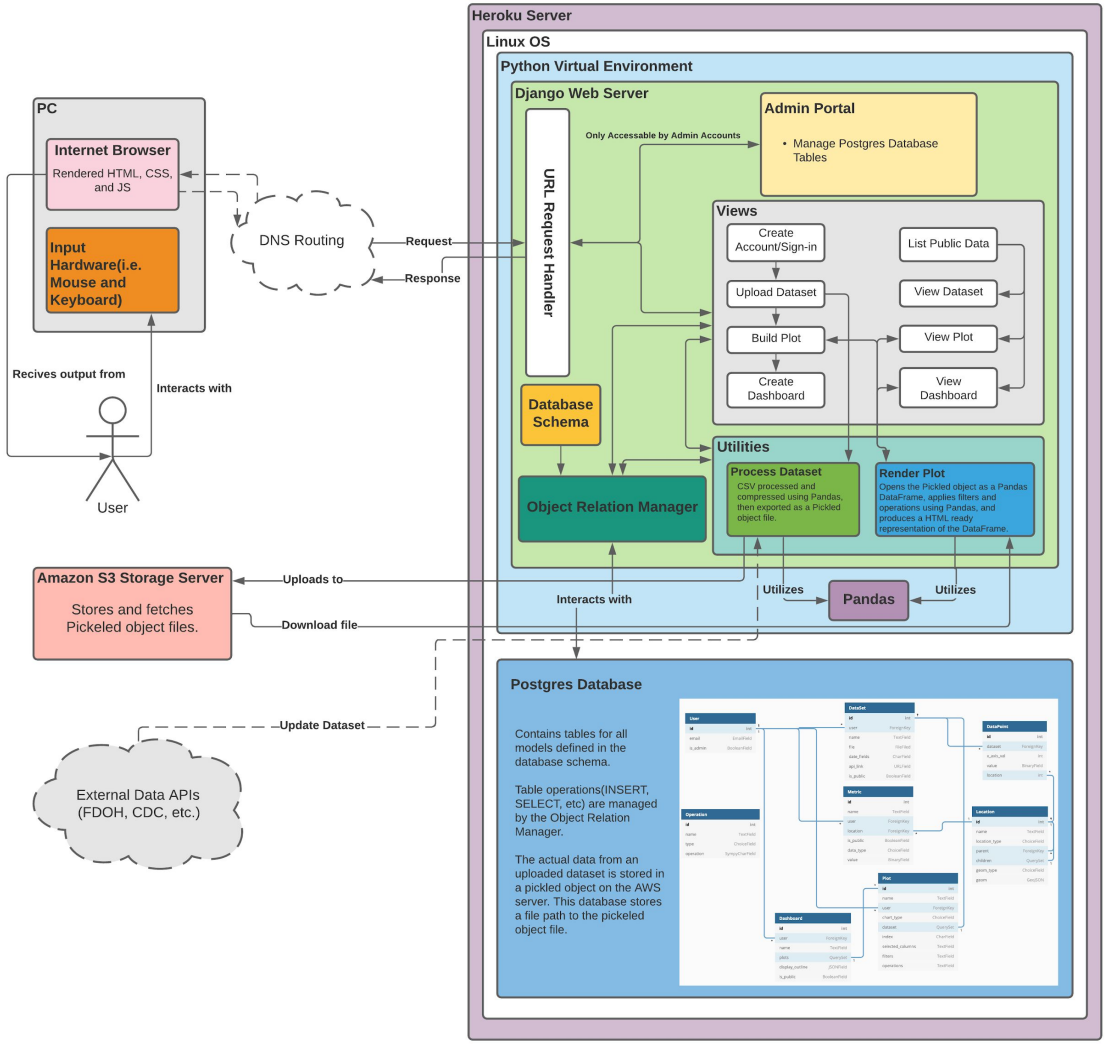
Demo Task 6


127.0.0.1:8000/public_data/
COVID-DASH
Dashboard
Public Data
Profile
Private Data
Upload Dataset
Create Plot
Public Dataset Application
View Applications
admin
Curated Data
This data has been reviewed and approved by the site admin.
Curated Dashboards
Show 10
Search
Name
User
Date Created
Last Modified
Showing 1 to of
1
2
3
Curated Datasets

Additional Demo for Vaccines



System Architecture Diagram - Current Progress



Task Matrix for Milestone 6

Task	Stian	Sam	Nicole	CJ
1) Ensure that all showcase materials are completed and submitted	Demo Video (25%)	User/Developer manual (25%)	Clean up ebook page and assist Sam and/or Stian as needed (25%)	Clean up poster and assist Sam and/or Stian as needed (25%)
2) Update Build Plot to use SQL statements	-	-	-	Implement evaluation of SQL queries on Pandas df (100%)
3) Auto updates for datasets	-	Implement automatic dataset updates via API endpoints (80%)	-	Assist Sam as needed with implementation (20%)
4) Update application process to work for plots & dashboards	-	-	Implement application flow for Plots and Dashboards (80%)	Assist Nicole as needed (20%)
5) Test/demo of system for evaluation	Speed (25%)	Reliability (25%)	User survey (25%)	Accuracy (25%)

Questions?