

Customizable Analysis and Visualization Tool for COVID Cases

Milestone 4

Team Members

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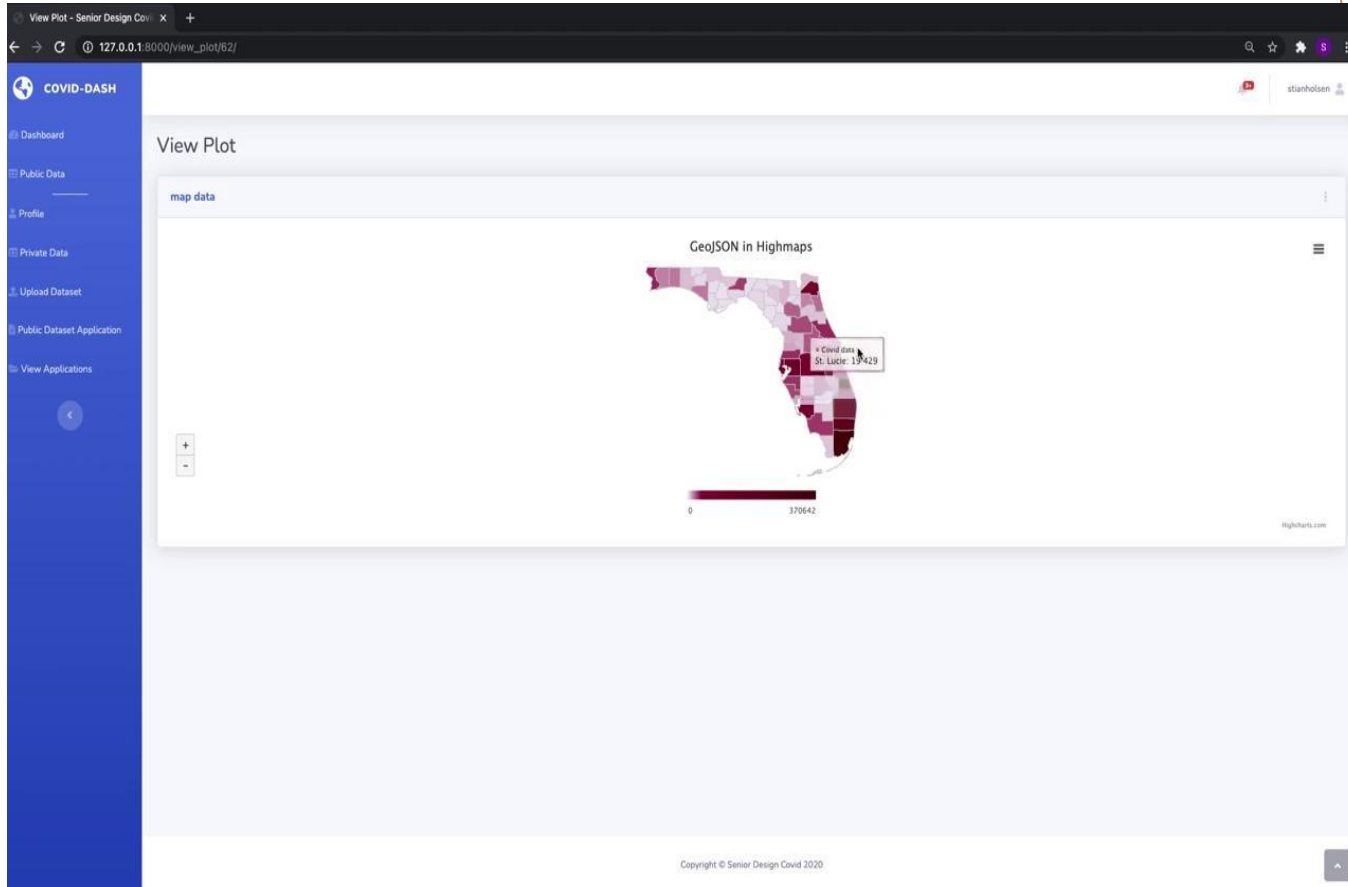
Progress Matrix

Task	Completion %	Stian	Sam	Nicole	CJ	To do
1. Continue work on scatter plot/plot utility	90%	80%	10%	0%	0%	More useful type of dataset for scatter plot
2. Continue work on plot creation tool	90%	0%	0%	0%	90%	Operations card update to be more intuitive
3. Continue work on creating lab testing plot/Start API auto update	90%	30%	60%	0%	0%	API auto update
4. Dataset management and application system	85%	0%	0%	60%	25%	User Edit/Delete data

Task 1 - Scatter plot/plot utility

- Needed to find a good use case for the scatter plot
 - Initially decided to use the scatter plot to see if there was a correlation between positivity rate and duration of mask mandates in Florida
 - Lack of mask mandate data in FL counties
 - Idea could be to plot positivity rate for cases in the US vs. lockdown or international flight restrictions
- Finishing up the plot utility
 - Can now display data on pie charts, line charts, bar charts and maps.

Demo - Map



Task 2 - Plot creation tool

- Redesigned the create plot tool
- Updated the filters card
 - Split into 3 dropdowns for each filter
 - 1)Column, 2)Conditional, 3)Value
 - Columns are loaded dynamically based on dataset selected.
 - Values are loaded dynamically based on the selected column

To do: Redesign the UI for applying operations. Develop a way to have operations and filter stored and applied together.

Demo - Create Plot 1

The screenshot shows a web browser window with the address bar displaying '127.0.0.1'. The browser has three tabs: 'Dashboard - Senior Design Covid', 'Demos - Google Drive', and '1 Create Plot - Senior Design Covid'. The 'Create Plot' tab is active, showing a web application interface. On the left is a blue sidebar with navigation links: 'Dashboard', 'Public Data', 'Profile', 'Private Data', 'Upload Dataset', 'Create Plot' (highlighted), 'Public Dataset Application', and 'View Applications'. Below these links is a circular back button. The main content area is titled 'Create Plot' and contains several input fields: 'Name' with the text 'Daily New Cases for Males over 65 in Brevard County', 'Plot type' with a dropdown menu set to 'Line Graph', and 'Dataset' with a dropdown menu showing 'Florida Department of Health Case Line Data' selected. To the right of the 'Create Plot' section is a 'Select Columns' panel. Below the 'Create Plot' section are two panels: 'Filters' with a '+' button and 'Operations' with a text input field and a '+' button. At the bottom left of the main content area is a blue button labeled 'Apply Changes'. The footer of the page contains the text 'Copyright © Senior Design Covid 2020' and a small upward arrow icon.

127.0.0.1

1 Dashboard - Senior Design Covid

Demos - Google Drive

1 Create Plot - Senior Design Covid

Dashboard

Public Data

Profile

Private Data

Upload Dataset

Create Plot

Public Dataset Application

View Applications

Create Plot

Name

Daily New Cases for Males over 65 in Brevard County

Plot type

Line Graph

Dataset

Florida Department of Health Case Line Data

Select Columns

Filters

+

Operations

+

Apply Changes

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Demo - Create Plot 2

The screenshot displays the COVID-DASH web application interface. The browser window shows the address bar with '127.0.0.1' and the page title 'Create Plot - Senior Design Covid'. The application has a blue sidebar with navigation links: Dashboard, Public Data, Profile, Private Data, Upload Dataset, Create Plot (active), Public Dataset Application, and View Applications. The main content area is titled 'Create Plot' and contains several input fields: 'Name' (Hospitalizations by Age Group), 'Plot type' (Bar Graph), and 'Dataset' (Florida Department of Health Case Line Data). A 'Select Columns' panel is visible on the right. At the bottom, there are 'Filters' and 'Operations' sections, each with a '+' button, and an 'Apply Changes' button.

COVID-DASH

- Dashboard
- Public Data
- Profile
- Private Data
- Upload Dataset
- Create Plot**
- Public Dataset Application
- View Applications

Create Plot

Name: Hospitalizations by Age Group

Plot type: Bar Graph

Dataset: Florida Department of Health Case Line Data

Select Columns

Filters

Operations

Apply Changes

Task 3 - Lab Testing plot

- Creation of a lab testing line plot that showed positivity rate over time
- The operations involved in this plot (count, sum, and division) could be bundled into a positivity rate operation for the GUI in the next milestone
- Obstacles included being able to format the timestamp column from the dataset into a way that would render properly on the frontend

Demo - Create Line Graph

The screenshot displays the COVID-DASH web application interface. The browser's address bar shows the URL `http://localhost:8000/build_plot/`. The application has a blue sidebar on the left with the following menu items: Dashboard, Public Data, Profile, Private Data, Upload Dataset, **Create Plot** (highlighted), Public Dataset Application, and View Applications. The main content area is titled 'Create Plot' and contains several input fields: 'Name' (with the text 'Lab Testing - Positivity Rate Demo'), 'Plot type' (a dropdown menu showing 'Line Graph'), and 'Dataset' (a search bar with a list of results below it, including 'Florida Lab Testing'). To the right of the 'Create Plot' section is a 'Select Columns' panel. Below the 'Create Plot' section are two panels: 'Filters' with a '+' button, and 'Operations' with a text input field and a '+' button. At the bottom left of the main content area is a blue button labeled 'Apply Changes'. The bottom of the page features a copyright notice: 'Copyright © Senior Design Covid 2020'.

COVID-DASH

Dashboard
Public Data
Profile
Private Data
Upload Dataset
Create Plot
Public Dataset Application
View Applications

Create Plot

Name
Lab Testing - Positivity Rate Demo

Plot type
Line Graph

Dataset
Florida Lab Testing

Select Columns

Filters
+

Operations
+

Apply Changes

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Task 4 - Dataset management and application system

- Created a new model that represents a submitted application.
- Created pages for submitting, viewing, and reviewing applications.
- Automatic transition to public data when something is approved.

Todo: Update to use idea of “private, shared, and curated”. Add functionality for plots and dashboard. Add ability for user to edit and delete their private data.

Demo - Application Process

Senior-Design-CovidDash/CovidDash x Application by nicolewright · Pull x View Applications - Senior Design x Select application to change | Django x +

127.0.0.1:8000/view_applications/

Apps Bookmarks Vine Gmail at i&i Use SSH Keys with... I Never Knew I Had... ops-class.org | Exams Practical Software... Other bookmarks

Dashboard

Public Data

Profile

Private Data

Upload Dataset

Public Dataset Application

View Applications

Successfully submitted application!

All Applications

Show 10 Search

Dataset	Date Submitted	Date Reviewed	Reviewer	Status
Mask Mandate Data	Feb. 15, 2021, 2:06 a.m.	Feb. 15, 2021, 3 a.m.	admin	Approved
FDOH Covid Case Data	Feb. 15, 2021, 3:04 a.m.	---	---	Pending

Dataset	Date Created	Date Reviewed	Status
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Task Matrix for Milestone 5

Task	Stian	Sam	Nicole	CJ
1) Continue work on scatter plot	Find a useful dataset and plot in on a scatter plot (100%)	-	-	-
2) Operations card update to be more intuitive	-	-	-	Develop a format and UI to have operations and filters mixed together (100%)
3) Save unique workspaces	-	-	Research and develop a format for saving multiple plots in order with options (25%)	Develop a utility to render and transmit multiple plots to one page (75%)
4) Layering plots	Research and develop rules for what plots can be layered. Frontend work (75%)	-	-	Research and develop rules for what plots can be layered. Develop a utility to take two plots and combine them (25%)
5) API auto updates for datasets	-	Ensure that all datasets, both private and public, have some associated endpoint for frequent updates (80%)	-	Assist with starting point (20%)
6) Finish Application Feature	-	-	Update to use curated, shared, and private (100%)	-

Questions?