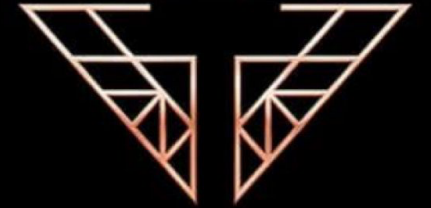


QuickVis

Charlie's Angels

PEARC 20 Hackathon





Meet the Team



Helena Coker

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Najm Mohamed

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Cesar Monsalud III

cesarmonsaludiii@gmail.com



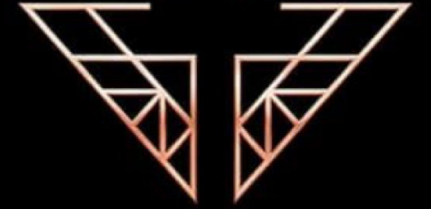
Hector Santiago III

hector.santiagomarti@gmail.com

Git Hub

https://github.com/hectorsantiago5/pearc20_quickviz





Problem Tasked

Scientists need a tool to visual data quickly in a simple and easy manner without computational science experience on their part.

Scope

Import

Users can import their own datasets

Choose

Users can select how their data is processed

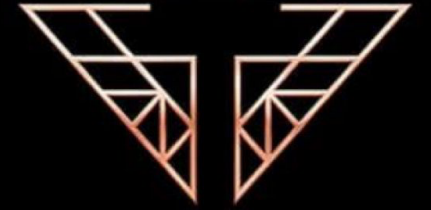
Plot

User's data is visualized geographically or graphically

Analyze

User's visualization and results are analyzed

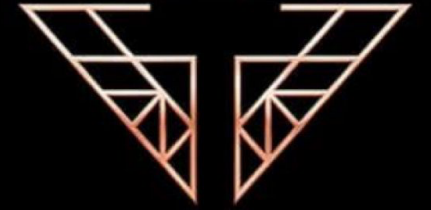




What We Learned

How to use

- Leaflet, Echarts, charts.js to display data on graphs and maps
- Passing data between any application and a jupyter notebook
- Learned how to make a website with 4 pages interacting
- Learned how to use google cloud
- Learned how to code in CSS
- Learned how to use GitHub and Repl.It properly



What We Started With

Started with:

- Nonfunctional static map
- Nonfunctional file uploader
- Rough single page website template



Deliverables

A fully functioning tool set that takes users data and displays it as a map or graph

Mapping Tool

Welcome to the Mapping Tool

Files must be uploaded in a .csv format.

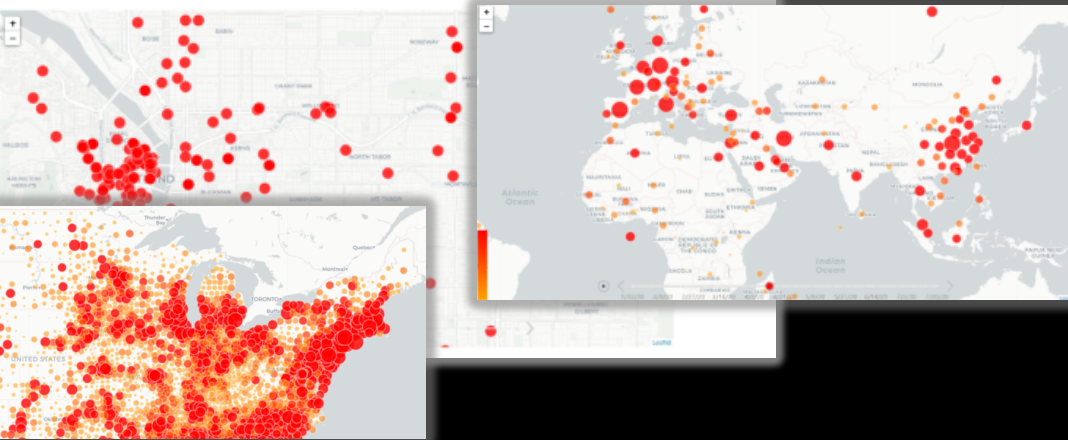
Instructions on how to save your file to the proper format is [here](#).

For .csv file formatting to ensure compatibility with the mapping tool:
Location descriptors for example country and city must be in first (1st) and second (2nd) column or column A and B.
Latitude must be in third (3rd) column or column C.
Longitude must be in fourth (4th) column or column D.
Single data classification must be in the fifth (5th) column or column E.

Click [here](#) for a sample file about community resources in Portland Oregon
Click [here](#) for a sample file about confirmed COVID-19 cases in the U.S.A.
Click [here](#) for a sample file about how many people recovered from COVID-19 globally

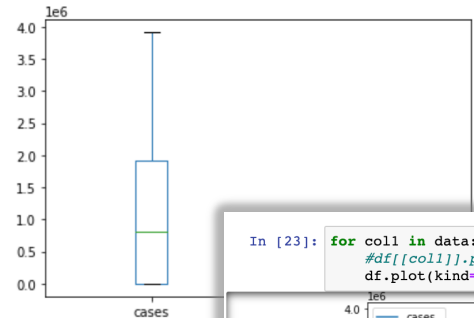
Click on the "Choose File" button to upload a file:

RoseCityResou...ormatted.csv

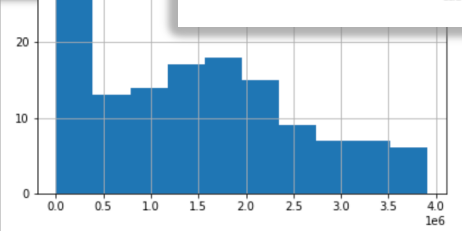


Graphing Tool

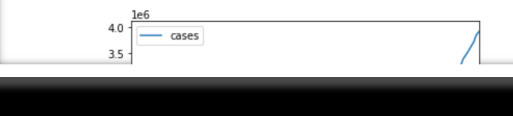
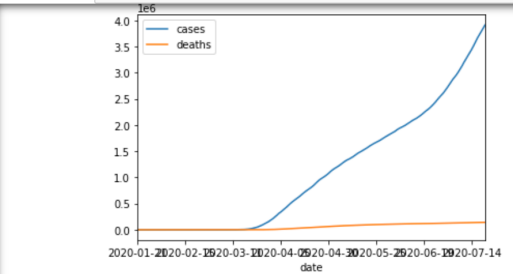
```
In [45]: for coll in data:  
         #df[[coll]].plot(kind='line', figsize=(15,10))  
         df.plot(kind='box')
```



```
In [44]: for coll in data:  
         #df[[coll]].plot(kind='line', figsize=(15,10))  
         df.hist(figsize=(15,10))
```



```
In [23]: for coll in data:  
         #df[[coll]].plot(kind='line', figsize=(15,10))  
         df.plot(kind='line', x=coll)
```





Future Work

- Working on expanding displaying users' data types
 - Box plots, line plots, bar plots, etc.
 - Mapping multi-variable dataset
- Statistical Analysis
 - Linear regression
 - Box plot and scatter plot and toggle bell curve feature
 - p-value with either standard alpha value (0.05) or feature to add their own
- Machine Learning and Predictive Analysis
 - One to locate areas of interest in a dataset
 - One for user assistance such as suggesting analysis types or possible formatting conflicts
 - One for user personalized such as recalling analysis they previously used on the site upon return



Our Thanks To



Charlie Dey



Linda Hayden



Chris Lanclos



Marlon Pierce



Our Thanks To



Science Gateways
Community Institute



Google Cloud Platform



Flask



PEARC20

Git Hub



https://github.com/hectorsantiago5/pearc20_quickviz





Data Sources

- https://github.com/CSSEGISandData/COVID-19/tree/master/csse_covid_19_data/csse_covid_19_time_series
- <https://opendata.imspdx.org/dataset/rose-city-resource-dev2>
- <https://www.bfro.net/>
- https://github.com/CSSEGISandData/COVID-19/tree/master/csse_covid_19_data/csse_covid_19_time_series
- <https://data.world/us-doe-gov/0fd3e1b2-0e53-4e37-b822-7c3e810fe78c>



Demo Time!

The image is a composite of two screenshots from a Zoom meeting. The left screenshot shows a PyCharm IDE with a Python file named `pear20_quickie.py`. The code is a Flask endpoint for file uploads, including logic for file validation, saving to a secure directory, and rendering a success message. The right screenshot shows a Zoom meeting with four participants: Cesar Mohamad III, Lena Coker, Hector Santiago, and Najm Mohamed. A presentation slide titled "Deliverables & Demo" is shared, featuring a "Mapping Tool" and a "Graphing Tool". The slide content includes:

Deliverables & Demo

A fully functioning public facing tool set that takes users data and displays it as a map or graph

Mapping Tool

Graphing Tool

Below the text, there are several small images showing data visualizations, including a map with red dots and a graph with red dots.