Project 2
John Hopkins University
Kai M. Hall
November 14, 2020

Topic: Car Crashes in the Montgomery County

Data Sets:

Crash Report Incident Data (https://data.montgomerycountymd.gov/Public-Safety/Crash-Reporting-Incidents-Data/bhju-22kf/data)

This dataset provides general information about each collision and details of all traffic collisions occurring on county and local roadways within Montgomery County, as collected via the Automated Crash Reporting System (ACRS) of the Maryland State Police, and reported by the Montgomery County Police, Gaithersburg Police, Rockville Police, or the Maryland-National Capital Park Police.
Please note that these collision reports are based on preliminary information supplied to the Police Department by the reporting parties. Therefore, the collision data available on this web page may reflect

Meta-data screenshot:

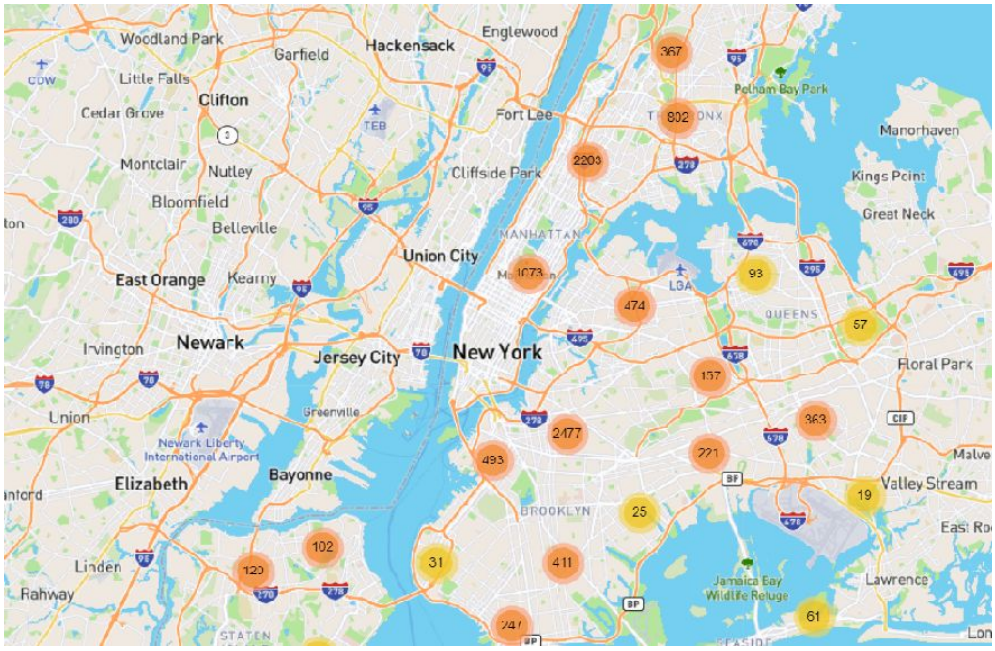

```
{
  "meta" : {
    "view" : {
      "id" : "bhju-22kf",
      "name" : "Crash Reporting - Incidents Data",
      "assetType" : "dataset",
      "attribution" : "Montgomery County, MD",
      "averageRating" : 0,
      "category" : "Public Safety",
      "createdAt" : 1505865580,
      "description" : "This dataset provides general information about each collision and details of all traffic co
Montgomery County, as collected via the Automated Crash Reporting System (ACRS) of the Maryland State Police, and r
Police, Rockville Police, or the Maryland-National Capital Park Police.\r\n\r\nPlease note that these collision rep
Police Department by the reporting parties. Therefore, the collision data available on this web page may reflect:\r
investigation\r\n-Information that may include verified and unverified collision data\r\n-Preliminary collision cla
further investigation\r\n-Information may include mechanical or human error\r\n\r\nThis dataset can be joined with
the State Report Number.\r\n* Crash Reporting - Drivers Data at https://data.montgomerycountymd.gov/Public-Safety/C
- Non-Motorists Data at https://data.montgomerycountymd.gov/Public-Safety/Crash-Reporting-Non-Motorists-Data/n7fk-d
      "displayType" : "table",
      "downloadCount" : 4629,
      "hideFromCatalog" : false,
      "hideFromDataJson" : false,
      "iconUrl" : "fileId:d8a753f6-7826-4941-8550-5a8d517d7bee",
      "indexUpdatedAt" : 1569562872,
      "licenseId" : "PUBLIC_DOMAIN",
      "newBackend" : true,
      "numberOfComments" : 0,
      "oid" : 31401663,
      "provenance" : "official",
      "publicationAppendEnabled" : false,
      "publicationDate" : 1556715260,
      "publicationGroup" : 14474154,
      "publicationStage" : "published",
      "rowClass" : "",
      "rowsUpdatedAt" : 1605249679,
      "rowsUpdatedBy" : "ajn4-zy65",
      "tableId" : 16165607,
      "totalTimesRated" : 0,
      "viewCount" : 39294,
      "viewLastModified" : 1556827309,
      "viewType" : "tabular",
```


Inspiration:

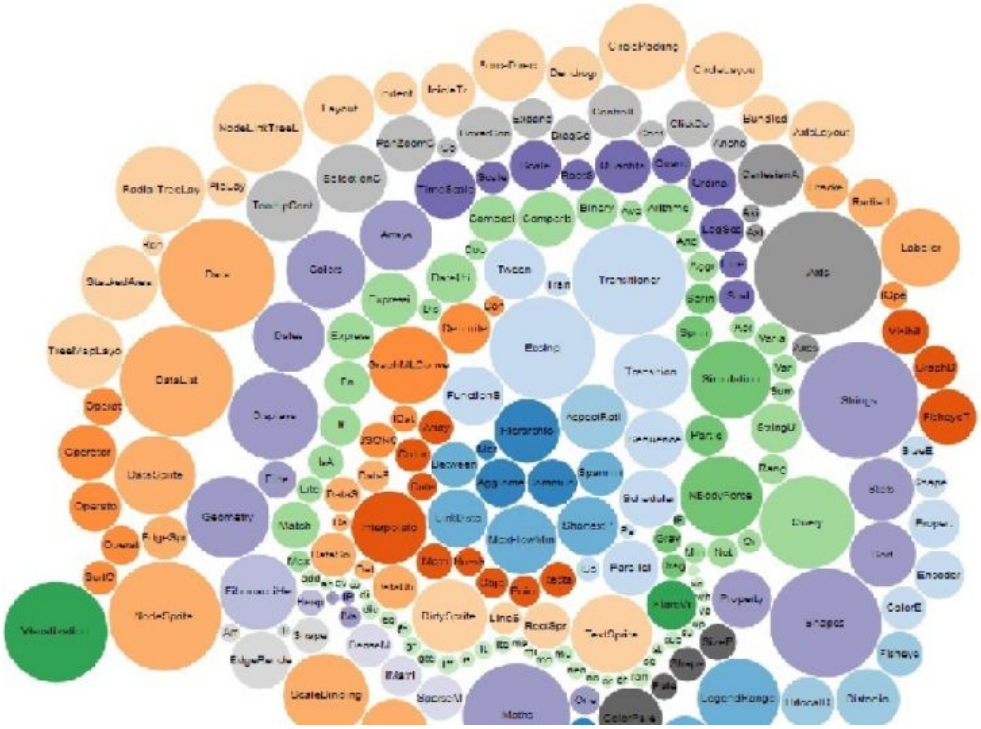
I've been driving in the DMI for fifteen years. I've seen many car crashes, some that have ended tragically. This project hopes to visualize the frequency of car crashes with specific details shown: the location, if alcohol was present, and damage over year 2020 thus far. The hope is to persuade the push for self-driving cars.

Inspiring Visualizations:

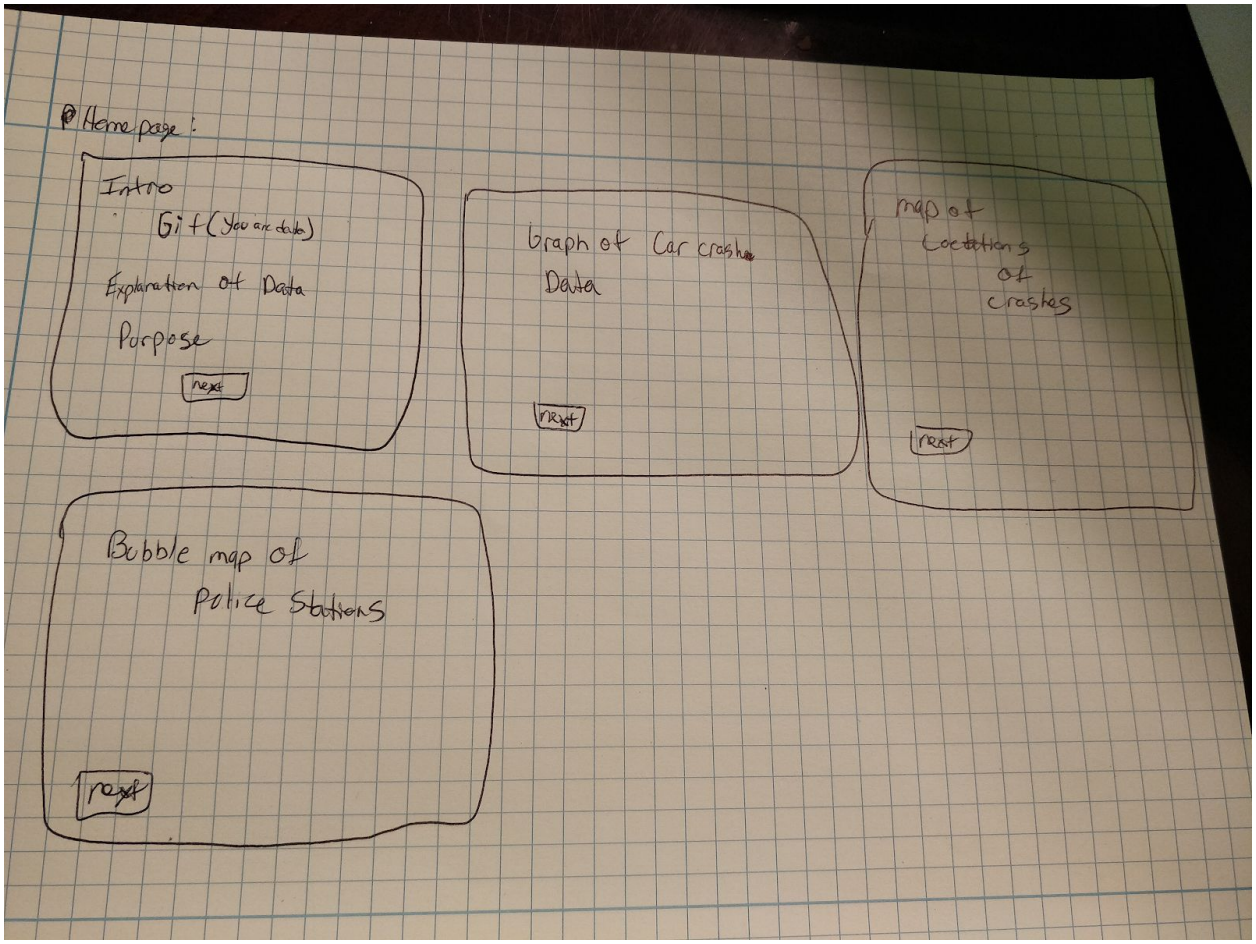
This visual will show the specific locations and number of crashes.



This visual will show the police departments and the size of the bubble will be number of crashes reported.



Sketch:


Home page:
Intro
Gif (You are data)
Explanation of Data
Purpose
next
Graph of Car crashes
Data
next
map of
Locations
of
crashes
next
Bubble map of
Police Stations
next

1. Your visualization must include a Python Flask–powered API, HTML/CSS, JavaScript, and at least one database (SQL, MongoDB, SQLite, etc.).
2. Your project should fall into one of the below four tracks:
    - A custom “creative” D3.js project (i.e., a nonstandard graph or chart)
    - A combination of web scraping and Leaflet or Plotly
    - A dashboard page with multiple charts that update from the same data
    - A “thick” server that performs multiple manipulations on data in a database prior to visualization (**must be approved**)
3. Your project should include at least one JS library that we did not cover.
4. Your project must be powered by a data set with at least 100 records.
5. Your project must include some level of user-driven interaction (e.g., menus, dropdowns, textboxes).
6. Your final visualization should ideally include at least three views.