opencrimemapping.org intro

Opencrimemapping.org was created to showcase some simple examples of what can be accomplished by using this framework. The data used to build the application was sourced from the Dallas Open Data website. This website is designed to provide transparency to citizens and developers with a variety of data sets that pertain to city governance, services, and culture. The data set of interest is titled Police Incidents. The Police Incidents data set is provided by the Dallas Police Department and is updated daily with incident reports dating back to June 1, 2014. As of May, 2018, there are approximately 357,000 incident entries and there are about 103 incident attributes. The complete list of incident attributes is found in the appendix. Some important features of an individual incident report include the unique identifier, ‘Incident Number w/Year’, the location details of the incident, the descriptive details of the complainant, the reporting officer details, and the details of the type of incident that occurred.

The maps on opencrimemapping.org were developed using R, Leaflet and R Shiny.

R is an open-source language that is used for statistical computing and it compiles and runs on both Windows, MacOS, and multiple UNIX plafforms[2]. R was used to gather and clean up the data so that it could be used on our maps. For the examples provided we are only using the records that provide location information. Any incidents that did not provide location information were discarded.

Leaflet is an open-source JavaScript library that provides all of the necessary functions to create interactive and mobile-friendly maps[3]. Leaflet was used in conjunction with R to map all of the points that were provided by the Dallas Open Data dataset. Using leaflet allows it’s user to have interactivity with the maps, they provide a number of different map types and the map creators can use different color markers as well as an array of different base maps. All of which are very important parts of this framework.

Shiny is an R package that helps in building web applications[4]. Shinny was used to publish the maps created on this framework on the web.

1. <https://www.dallasopendata.com/>

2. <https://www.r-project.org/about.html>

3. <https://leafletjs.com/>

4. <https://shiny.rstudio.com/>