CS 411

SUMMER 2024

Project Proposal

College Crime Tracker Website

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Project Summary:

This project is about documenting criminal activity at different universities across the midwest. Using data from University police departments the project intends to showcase where and when crime occurs across the universities. University students and faculty want to know where and when a crime has occurred so that they can remain safe and informed. This project intends to showcase crime trends so that these students and faculty can plan their day safely and remain informed about what happens in their community.

Application Description:

This application is a website that takes crime log data from the police departments of UIUC and other universities in order to display crime statistics. The project intends to be a way for students and faculty around universities to find out when and where crimes have occurred. This application will keep people on campus informed about what is going on in the community. This will help keep them safe and help the people in the community make informed decisions for their safety. As a creative component it will also showcase trends in crime across the communities and compare different colleges' crime rates. This will be achieved by using SQL commands in order to calculate the amount of crimes, the amount of specific crimes, instances of specific crimes over time, and the amount of crimes per capita.

Application Usefulness:

This application is useful because it allows people in these college communities to find out what goes on in their communities. This allows people to know what types of crimes happen and the location of these crimes. This helps people make decisions regarding their safety. There are some similar websites: UIUC has a web page that displays crimes on a map (https://police.illinois.edu/info/map/). This application is different because it combines the daily crime log with the map in order to give users a better experience. It also combines several universities into one application making it more accessible to a wider range of users. Another unique feature of this application is the tracking of crime trends over time.

Application Reality:

This application uses CSV data from University police department reporting in order to collect the data. There will be 3 columns with rows spanning the previous 60 days. One of these data sources will be the University of Illinois daily crime log, which can be found at https://police.illinois.edu/info/daily-crime-log/. This crime log has more than 3 columns, however the main 3 columns that are necessary are “Description”, “Location”, and “Date of Offense.” These 3 columns will be found across all college data sources and these columns are the critical data that are necessary in order to complete this project. Another example of a datasource that will be used is the Michigan State University Clery Crime and Fire Log found at https://dpps.msu.edu/services/clery-log.

Application Functionality:

The website will have several different pages. These pages will be split into mapping crimes, retrieving data, and tracking trends. The map section of the website will allow users to search for crimes by displaying instances as bubbles on a map to represent where crimes took place. These bubbles will be color coded to represent different types of crimes. The section will also allow users to filter this map by typing in information like address, crime type, and date range. For example, users will be able to display instances of theft from May 2022 to August 2022. The section involving the retrieval of data will allow users to create their own tables using the data from the crime logs. Similar to the map section, it will allow users to filter the data using crime type, location, and date. These filtered tables can then be exported to other sources, such as a CSV file. The trends part of the website will also feature the same previously mentioned filters. It will allow users to track how crimes change over time. For example, by graphing the instances of battery across 2022. The user will also be able to track correlations between different types of crimes. For example, if the number of instances of battery increase or decrease compared to instances of theft. Some of these features can be seen in the image below:

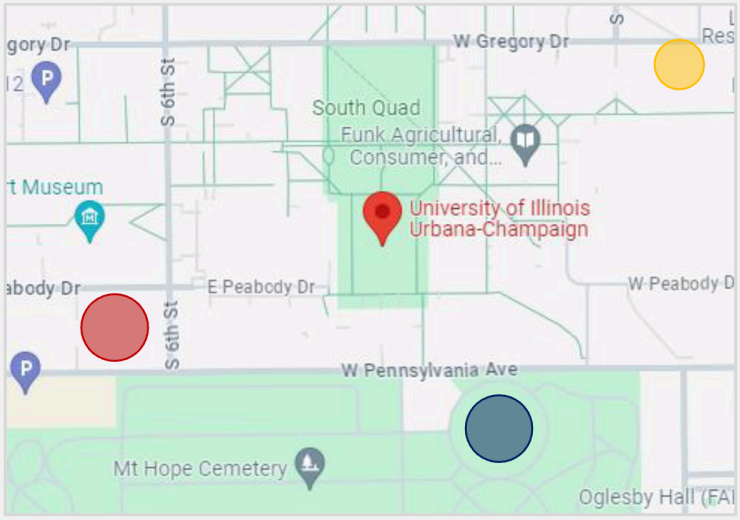
MAP

Enter Address

Crime Type

Start Time

End Time



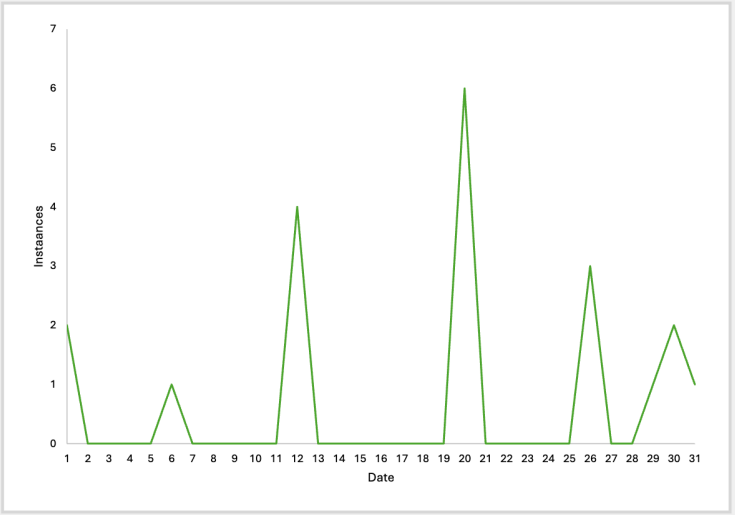
TRENDS

Enter Address

Crime Type

Start Time

End Time



Project Work Distribution:

In order to ensure that each member of the team is contributing equally to the project there will have to be a designated work distribution. Mithesh will be responsible for handling the tables connecting the different colleges. Albert will be responsible for handling the tables that connect different crimes together. Teja will be responsible for handling the tables that connect locations and dates. These responsibilities will be used in order to make each member contribute equal work and ensure that the project will be completed in a timely manner.