Syracuse University

Memo

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| To: | Dr. Landowski |
| From: | Joe Hernandez |
| Date: | 4/29/2019 |
| Re: | Project Proposal |

**Topic: Analyze the human waste reporting and responses**

**Synopsis:**

San Francisco is experiencing an increasing report of human feces and has become a priority issue for politicians in its locality. The residents use the 311 non-emergency service calls to clean up and have voiced their concerns as an issue with the homeless. My goal is to see how bad the human feces reports are as far as frequency and location and how responsive the authorities are maintaining the city for tourists, locals, etc. I hope to learn that over time that if there is a higher frequency of reports for this event that the cleanup is swift especially during daylight hours when the city is most active as the new mayor of San Francisco promised to address this issue.

**Data Description:**

The main data set consists of a Comma Separated Value Spreadsheet that contain information for municipal 311 non-emergency service calls for reports of human waste in the San Francisco area from July 2011 to March 2019. Significant fields for observation consist of the following (original dataset consists of 20 columns and 3.48M rows):

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| Fields | Description | Example |
| CaseID | The unique ID of the service request created. | 10667600 |
| Opened | The date and time when the service request was made | 3/31/2019 12:39:41 PM |
| Closed | The date and time when the service request was closed | 3/31/2019 4:21:00 PM |
| Updated | The date and time when the service request was last modified. | 4/12/2019 9:30:10 PM |
| Status | A single-word indicator of the current state of the service request. | Open |
| Category | The human readable name of the service request type | Sewer Issues |
| Request Type | The human readable name of the service request subtype | General Cleaning |
| Request Details | The human readable name of the service request details | wellbeing\_check |
| Address | Human readable address or description of location | 2346 17TH ST, SAN FRANCISCO, CA, 94103 |
| Street | Primary Street of the associated address. Parks may have a park name instead of a street name. Requests not associated with an address will be blank. | FILLMORE ST |
| Neighborhood | San Francisco Neighborhood as defined in 'SF Find Neighborhoods' | Alamo Square |
| Source | Mechanism or path by which the service request was received | Phone |

**Research Questions:**

* What times of the day have the highest frequency of reporting, least frequency?
* How much waste is each neighborhood and street location?
* Are there any longer-term trends in the reporting of human waste? Is reporting declining?
* Has there been a transition in the source of reporting human waste covered by the data?

**Data Preparation Plan**

1. Load the data into Python
2. Filter the data set to only records in Groups we are interested in analyzing
3. Explore the data for anomalies, missing data, adjusted duration, etc.
4. Resolve any issues related to the previous step, including deciding how to handle abstract records.
5. Convert the data from open and close timestamps to response duration and time of day.
6. Add features such as duration and time of day for the reporting.

**Data Source**

* <https://data.sfgov.org/City-Infrastructure/311-Cases/vw6y-z8j6>