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FINAL PROJECT

Contents

Project Overview

The final project for SOC 4650/5650: INTRODUCTION TO GIS requires students to clean and map non-emergency call data from the City of St. Louis. These data describe the presence of various types of problems in City neighborhoods. The project brings together many of the scientific computing and GI science skills that are developed over the course of the semester. It also models the collaborative nature of GI science work by asking students to complete some aspects of the final project as a group using the collaborative development (GitHub) and communication (Slack) tools we have learned this semester. This guide contains instructions for completing the final project.

Ecometrics and Big Data

Among sociologists and urban researchers, there has been a recent desire to produce quantitative metrics that assist in assessing the social characteristics of neighborhoods. This effort, termed "ecometrics", initially relied on the development of systematic quantitative measures derived from neighborhood surveys and observation (Sampson and Raudenbush 1999). The goal of ecometrics, like econometrics[1] and psychometrics[2], has been to produce generalizeable techniques that are not specific to a single neighborhood or city, but rather can be used to measure and compare social processes in various cities.

[1] The statistical field of economics that seeks to model economic theory.

[2] The statistical field of psychology that seeks to measure psychological health and mental illness.

The logic of these instruments has been extended, however, to also encompass novel administrative data sources produced by cities themselves. Unlike earlier ecometric instruments, measures derived from administrative data can be obtained for little to no cost and carried out over long time periods (O'Brien, Sampson, and Winship 2015). While "big data" may be faddish and even subject to notable failures (Lazer et al. 2014), large datasets of data produced by cities may offer us the opportunity measure the health or disorder of neighborhoods in new ways.

The Citizens' Service Bureau

Following O'Brien and colleagues (2015), we will use non-emergency call data collected through a "3-1-1" system (the three digit phone number sometimes used for these services) for the final project. The Citizens' Service Bureau (CSB) is St. Louis's version of the 3-1-1 system. They describe their purpose in city government as being "to effectively and efficiently register and route city service requests, answer citizen requests for information, and provide City departments with statistics as needed." These types of requests cover a variety of non-emergent issues - everything from potholes to graffiti to traffic lights that need new bulbs. Our goal with these data is to map the extent of particular types of urban issues that may signal the "health" of neighborhoods within the City.

Final Project Progression

Producing the final project deliverable(s) requires a number of distinct steps that mirror the workflow we have introduced this semester for conducting spatial research. You will need to clean and project tabular data related to the CSB call category of your choice, clean and project demographic data about St. Louis, and produce a number of reference and thematic maps that describe your topic. To produce those maps, you will also need to obtain and clean spatial data that covers the St. Louis area. Instructions for each of these aspects of the project are included in subsequent sections of this document.

Work Groups   All students will be assigned a work group after the initial memos are submitted. We will try to place students in work groups who are working on similar topic areas. Each work group will be responsible for collectively creating the geodatabase and initial set of maps that group members will need for their final projects. The instructions in this document will detail which aspects of the project are to be completed by the group and which aspects each individual student is expected to complete.

   Each work group will be assigned a GitHub repository and a Slack channel. Groups are expected to track their progress using the GitHub Project associated with their work group repo. Work will be uploaded to individual branches within your group repository and then merged through pull requests, with group members providing "peer review" of each others' work before accepting pull requests. They should also utilize Slack for communication, and can also reach out to both Chris and Kyle from their work group Slack channel.

Students will be asked to submit "peer reviews" of each others' contributions to the group at the end of the semester. However, if there are issues with group members failing to complete work in a timely fashion, they should be brought to Chris immediately. Failure to participate fully in the work group will be reflected in students' participation and final project grades.

All Students   For all students, there is an official check-in on **April 11th** when a draft poster is due. Your draft should be uploaded as a `pdf` to your GitHub assignments repository. You are expected to have made *substantial* progress at this point - the overall layout and design of the poster should be established and a portion of the maps should be made and included on the poster. This will only be graded for completion - students who do not submit poster drafts or whose poster drafts show minimal progress will receive a deduction applied to their final project grade.

SOC 5650 Only   For students in soc 5650, you will have two additional check-in dates related to the final paper. An annotated bibliography is due in class on **March 21st**. Students should also submit a draft paper on **April 11th**. Your annotated bibliography and draft paper should both be uploaded as a `pdf` to your GitHub assignments repository.

Final Submission   Final versions of posters and, for soc 5650 students, papers, should be uploaded to GitHub by **May 9th** at 4:00pm. Hard copies of both the poster and, for soc 5650 students, papers, should be brought to our mini research conference at 4:00pm on **May 9th** in the Busch Student Center. Grades and feedback will be submitted through GitHub. See the syllabus for the weight of the various aspects of the final project, and see the rubrics are how the poster and, if relevant, the paper will be graded.[3]

[3] The rubrics will be available with these instructions in the `finalProject` repository on GitHub.

How the Citizens' Service Bureau Works

The CSB is a clearing house for the City. Requests for service come primarily from residents or business owners in the City through the CSB's website or by phone. Other City agencies also put requests for service into the CSB, and they take requests via fax, email, and Twitter.

The following pages walk through what a CSB submission via the City CSB website entails. It is an example of semi-structured data collection. Where possible, fields with a limited number of options are used to limit the types of data or information can be entered. However, there are a number of places where unstructured information can be entered as well. The form fields that appear are flexible. For different problem types, different questions are asked.

The CSB also uses this form to help users identify whether the CSB will actually be able to assist them. For example, they warn submitting residents that graffiti above the second story or on particular types of construction materials cannot be cleaned by the City.

Note how the CSB makes use of spatial data as part of the data collection process. When an address is entered and successfully located, the next page returns parcel and address level information from City datasets overlaid on the Google Maps basemap. This allows submitters to verify that they are correctly locating the problem that they wish to report.

Once the report is addressed, it is marked as "Closed" in the CSB database and its resolution is updated on the CSB's website. Residents who provided their contact information
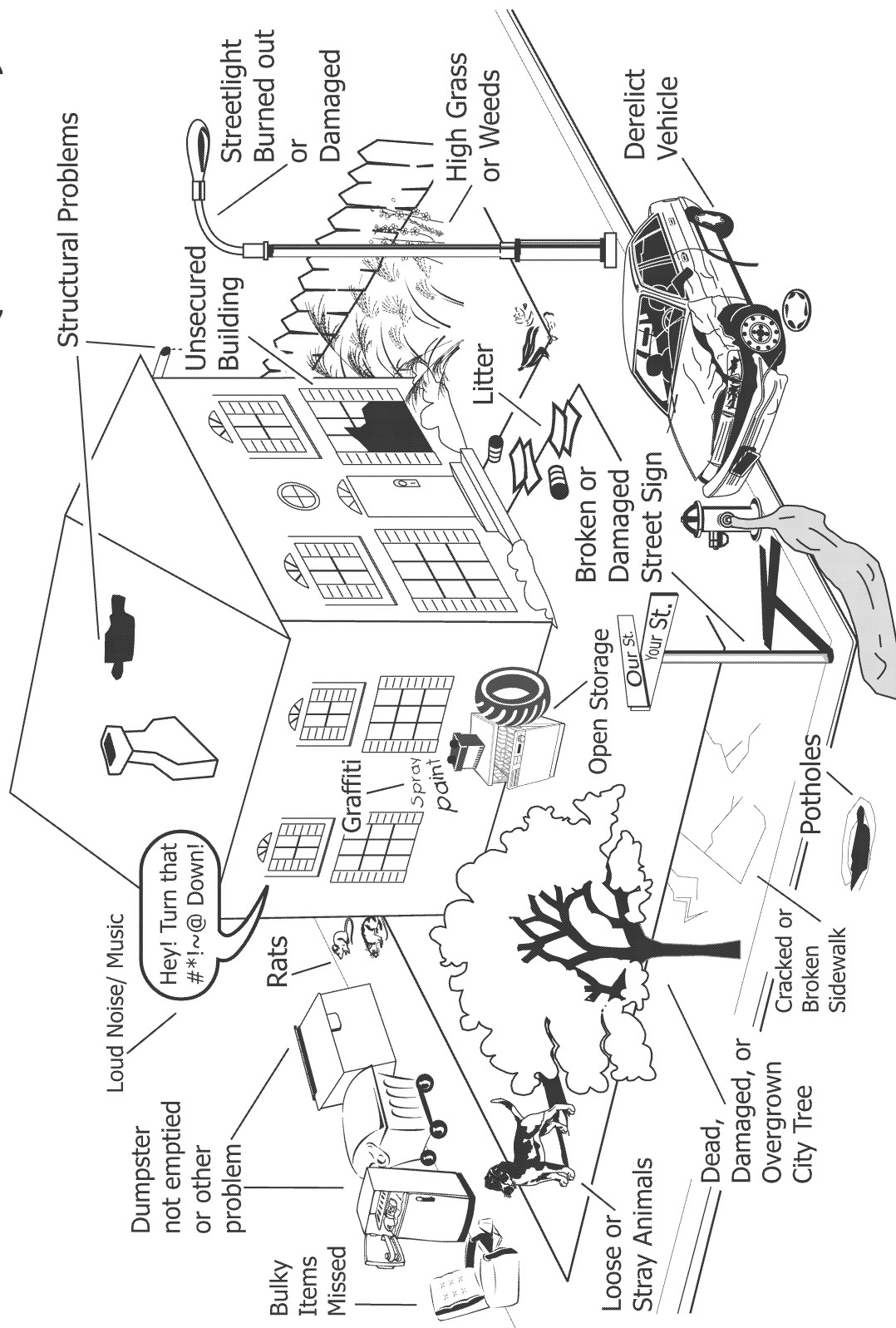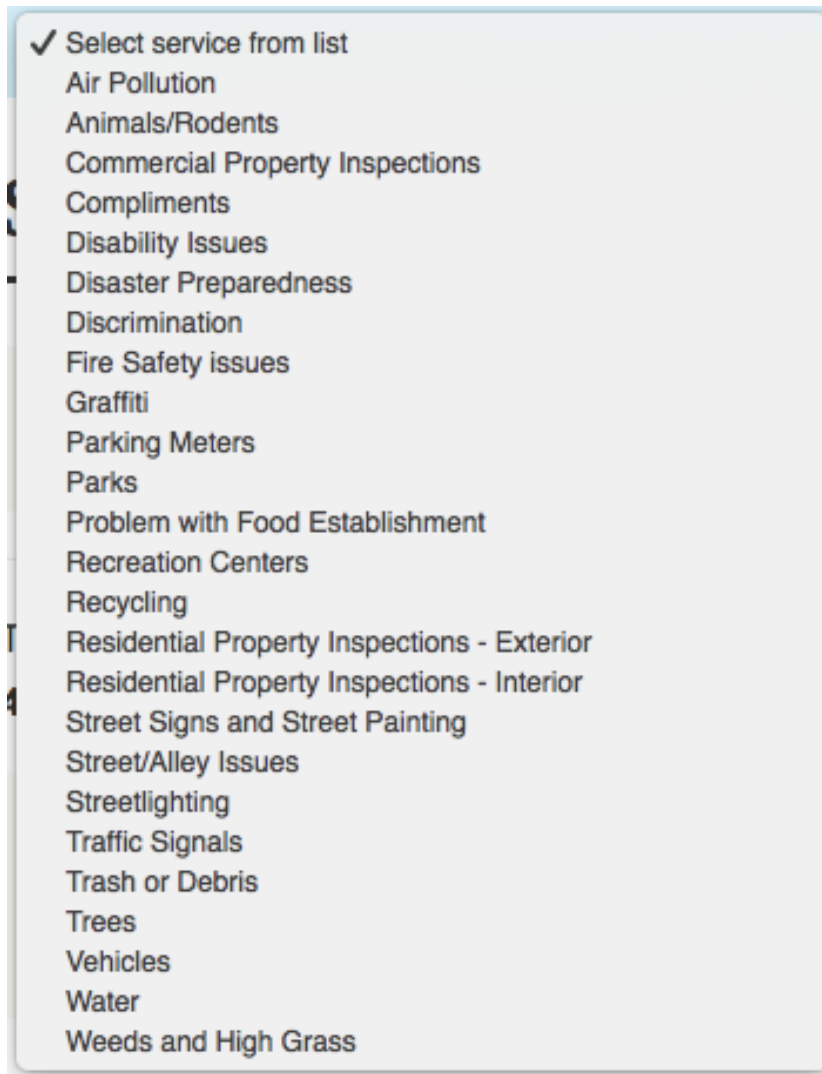
Figure 1: This is the front page of a flier produced by the Citizens' Service Bureau that describes situations the CSB can help residents handle.

Figure 2: This is the main list of problems that someone submitting a request to the CSB via their website can select from.

√ Select service from list
Air Pollution
Animals/Rodents
Commercial Property Inspections
Compliments
Disability Issues
Disaster Preparedness
Discrimination
Fire Safety issues
Graffiti
Parking Meters
Parks
Problem with Food Establishment
Recreation Centers
Recycling
Residential Property Inspections - Exterior
Residential Property Inspections - Interior
Street Signs and Street Painting
Street/Alley Issues
Streetlighting
Traffic Signals
Trash or Debris
Trees
Vehicles
Water
Weeds and High Grass

Step 1 of 6: Select The Problem

- Graffiti
    - Trash container is damaged/has graffiti
    - Graffiti on park equipment
    - Graffiti on private property
    - Graffiti on private/commercial trash dumpster
    - Graffiti on public property
    - Inspect city tree (tree between street and sidewalk)
    - Graffiti on a traffic sign/device

Figure 3: For many problem types, users are offered a list of possible sub-types that help the CSB further narrow which City agency will ultimately be responsible for addressing the concern.

Step 2 of 6: Where is the request needed?

By Address

Street Address:

3143 KEOKUK ST

Search

E.g. 1520 Market

By Intersection

Street 1:

- Select street from list-

Street 2:

- Select street from list -

Search

Figure 4: Users can submit requests either by street address or by an intersection.

Step 2 of 6: Confirm the location

You have selected the following location: **3143 KEOKUK ST**
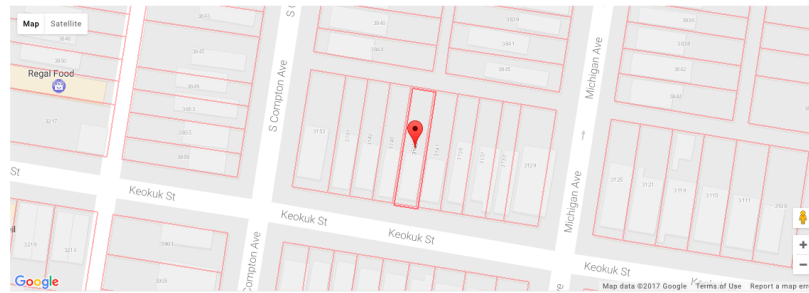
Is This Location Correct?

☑ Yes, continue to step 3

← No, try a new address

Figure 5: Note how spatial data are overlaid on the Google Maps basemap. These data include parcel boundaries and street address numbers.

Step 3 of 6: Answer detailed questions about your request

Question 1: How high up is the graffiti?

Note: City cannot remove graffiti higher than the 2nd story. For these cases, the owner is resposible for removing the graffiti. You may instead submit a request for a building inspection

Change to: Inspect for exterior building code violations

⦿ Ground level

◯ 2nd story

Continue

Figure 6: The CSB uses a number of screens to obtain more detailed information about the request and to give users information that may impact how their request is processed. This screen captures the height of the graffiti off the ground.

Step 3 of 6: Answer detailed questions about your request

Question 2: Location of graffiti
◯ On building-rear
◯ On building-front
⦿ On building-side
◯ Garage
◯ Other - see details

Continue

Figure 7: The second screen for the graffiti request. This screen captures the location of the graffiti on the building.

Step 3 of 6: Answer detailed questions about your request

Note: City does not remove graffiti from fiberglass doors or wooden fences. For these cases, the owner is resposible for removing the graffiti. You may instead submit a request for a building inspection

Question 3: Type of surface
- ● Unpainted Brick
- ○ Painted Brick
- ○ Unpainted Concrete
- ○ Painted Concrete
- ○ Unpainted Metal
- ○ Painted Metal
- ○ Other - see details

Continue

Figure 8: The third screen for the graffiti request. This screen captures the construction material that the graffiti has been pained on, which can impact how the graffiti is removed.

Step 3 of 6: Answer detailed questions about your request

Question 4: What color is the graffiti?

not to exceed 450 characters

Blue and white

Continue

Figure 9: The fourth screen for the graffiti request. This screen captures details on what the color of the graffiti is.

Step 3 of 6: Answer detailed questions about your request

Question 5: Is the property vacant or occupied?
- ○ Vacant
- ● Occupied
- ○ Unknown

Continue

Figure 10: The fifth screen for the graffiti request. This screen captures details about the building that has been affected.

Step 3 of 6: Answer detailed questions about your request

Please describe the details regarding your request, such as exact location (front, rear, etc.), description of problem, and any other relevant facts that may help the inspector resolve your issue.

You will have the option to attach a photo to this request in step 5. Even if you plan on providing a photo, it is very important that you provide details below.

Provide Details: (not to exceed 450 characters)

Graffiti is located on the east side of the building in the gangway between this building and 3141 Keokuk Street.

Continue

Figure 11: The sixth screen for the graffiti request. This screen captures details about where the graffiti is on the affected. Note how this is different than FIGURE 6 in terms of the way the data are collected.

Step 4 of 6: Enter your contact information

Please let us know how to contact you in case we need more information to handle your request. (optional)

For Citizens

Last Name
Doe

First Name
Jane

Email Address
jane_doe@gmail.com

For Official Use Only

Account
Please use upper case

Continue

Figure 12: This screen captures details about who is submitting the request. Note that it is *optional*.

Step 5 of 6: Upload Supporting Files (Optional)

Please upload any supporting documents that will clarify your request (optional).

Supported document types: PDF, JPG, JPEG, GIF, PNG

Upload 1

Choose File   graffiti.png   Clear this file

+Add a related document

Submit Request

Figure 13: This screen allows users to upload a photo or document that pertains to the request. This is the last step before submitting the request to the CSB and verifying its accuracy.

Check Status of a Service Request

Find out how your service request is progressing

Your search for service request ID **904156**

New Search

Service Request (SR)ID:	904156
Problem Location:	3143 KEOKUK ST
Request Initiated:	10/14/2016
Dept To Receive SR:	Operation Brightside
Problem Type:	Graffiti on private property
Dept Response Due By:	11/03/2016
Status of Request:	Closed
Dept Investigation Completed On:	10/25/2016
Dept Resolution:	graffiti removed

Figure 14: This screen shows the resolution of the request.

The Citizen's Service Bureau Data

The core data for this project cover seven years of Citizens Service
Bureau (CSB), from 2009 through 2015. The data were originally
obtained in February of 2017 from the City of St. Louis's Public
Datasets portal.

St. Louis City's Public Datasets - Terms of Use

All of the data that the City of St. Louis makes public, including the
CSB data, are available under the following license:

Description *The City of St. Louis strives to enhance public access to and use of data that it collects and publishes.
As part of an initiative to improve the accessibility, transparency, and accountability of City government, this catalog
offers access to a repository of government-produced, machine-readable data sets. The datasets are organized by orig-
inating department. The City provides access to the information free of charge subject to the terms of this agreement.
Use of data derived from the datasets, which may appear in formats such as tables and charts, is also subject to these
terms.*

Terms *The City of St. Louis reserves the right at any time to update, modify, or discontinue the release of the datasets.
The City does not warranty the completeness, accuracy, content, or fitness for any particular purpose or use of any
public dataset made available, nor are any such warranties to be implied or inferred with respect to the public datasets
furnished therein. The City shall not be responsible or liable for the accuracy, usefulness or availability of any data in
the datasets.*

Accountability *When working with the datasets, be aware that these files are raw extracts derived from various
data sources. The City of St. Louis is aware that errors exist in these datasets. Contact the originating department if
questions/issues arise.*

Data Access

All data can be found in the file `csbCreate.csv`, which is located
in the `finalProject` repository on GitHub. This repo also contains
the code used to create `csbCreate.csv`. **You do not need to execute
this script. It is provided for reference only.** The output the script

generated is included. The total size of the initial dataset is quite large - 87.9MB. It contains $n = 786,355$ observations.

Data Definitions

The following are some basic descriptions of what each variable in 'csbCreate.csv' are supposed to measure:[4]

- `requestid` - CSB assigned identification number for each request

- `problemcode` - general description of the problem associated with the request

- `description` - (sometimes) more detailed description of the problem associated with the request

- `probaddress` - address where problem is located

- `probcity` - city where address is located

- `probzip` - zipcode where address is located

- `datetimeinit` - date request made

- `srx` - UTM x coordinate for address

- `sry` - UTM y coordinate for address

- `status` - status of request

- `prjcompletedate` - date request completed

- `reqyear` - year request made[5]

Data Quality

You should be aware that these data contain a number of issues. There are numerous duplicate records, the identification variable does not uniquely identify observations, and the variable names are unnecessarily long. The spatial data are also incomplete - some addresses do not have corresponding x,y coordinates, and some x,y coordinates do not have corresponding addresses. All of these issues will need to be resolved in the data cleaning aspect of the project.

[4] It is worth noting that a number of these variables, including `probcity` and `probzip`, do not actually measure what they are supposed to.

[5] This is the only variable that was not included in the original data obtained from the City of St. Louis. Chris created this during the initial dataset construction process to facilitate the removal of cases before January 1, 2009 and after December 31, 2016.

Project Memo

Memo Assignment

The first task for the final project is selecting a category or categories of interest. The list below reflects the contents of the `problemcode` variable after you have completed the data cleaning steps. This is provided as a preview of the state of the dataset after the data quality problems have been dealt with. Note that the sample size has dropped from $n = 786,355$ to $n = 721,448$. We want you to select a final project topic based not on the initial data release, but on the sample size of observations you will have after the initial data cleaning is complete.

To complete the final project memo, scan the list below and select a problem code or codes that interest you. Your topic should have a minimum of 500 observations and ideally should have several thousand or more. If you find a topic that interests you that has fewer than the ideal number of observations, try to find a number of related categories so that you can pool those observations.

Your memo should be a markdown formatted text file that notes the problem code or codes you are interested in using along with the number of observations for each code. This should be saved in the `FinalProject/Memo` subfolder of your assignments repository on GitHub by the date and time noted in the syllabus.

Exploring for More Detail

If you want more detail about a particular observation, you can try viewing its corresponding data in the `description` variable. Import the data into Stata and use the following command, customized to your topic:

```
. tabulate description if problemcode == "Vacnt Bldg Unsecured"

                      DESCRIPTION |    Freq.     Percent       Cum.
--------------------------------+-----------------------------------
        Vacant Building, Unsecured |   11,575       64.81      64.81
            Vacnt Bldg Unsecured |    6,285       35.19     100.00
--------------------------------+-----------------------------------
                            Total |   17,860      100.00
```

You may find more detail about the observations, but you may not.
This is part of the challenge (and the joy!) of working with relatively
undocumented administrative data - sometimes we are not fully
aware of what all of the variables or values measure.

Problem Code Values for Cleaned Data

```
. tabulate code

                code |    Freq.    Percent       Cum.
--------------------+-----------------------------------
     07-21-2010 Flood |      16       0.00       0.00
     12-28-2015 Flood |       3       0.00       0.00
   14th - Tucker Median |     1       0.00       0.00
           A/C REPAIRS |     274      0.04       0.04
                ALARM |      17       0.00       0.04
           APPEARANCE |      35       0.00       0.05
       ATHLETIC LIGHTS |      1       0.00       0.05
   Actvt Court Warrant |     526      0.07       0.12
       Add Block Contact |   475      0.07       0.19
     Affordable Care Act |     3      0.00       0.19
     Alter Hist No Permit |   289     0.04       0.23
           Animal Abuse |     91      0.01       0.24
            Animal Bite |   1,156     0.16       0.40
     Animal(s) Surrender |   582      0.08       0.48
              Asbestos |      66       0.01       0.49
         Athletic Fields |     85      0.01       0.50
               BALLAST |       3       0.00       0.50
   BOILER/FURNACE/RADIA |     112      0.02       0.52
               BREAKER |       9       0.00       0.52
           Bad Condition |   4,890     0.68       1.20
     Bad Drain/Sewer, Ext |   222     0.03       1.23
     Bad Drain/Sewer, Int |   213     0.03       1.26
       Bagged Leaf Pickup |   474      0.07       1.32
```

Ballfield Benches	37	0.01	1.33
Bats	652	0.09	1.42
Bed Bugs	474	0.07	1.48
BicycleRackApp	21	0.00	1.49
Bike Lane Issues	4	0.00	1.49
Billboard Inspection	98	0.01	1.50
Birds-Food Cntrl	9	0.00	1.50
Blitz Items	142	0.02	1.52
Building Collapse	1,501	0.21	1.73
Bulky items missed	4,101	0.57	2.30
CEMA	757	0.10	2.40
CFPB Referral	2	0.00	2.40
CHK-JOBSITE	185	0.03	2.43
CIVIL UNREST	2	0.00	2.43
CLEAN AREA	34	0.00	2.43
CLOGGED DRAIN	101	0.01	2.45
CSB Record Request	423	0.06	2.51
Cart dumped incomplt	752	0.10	2.61
Cave-Ins	5,183	0.72	3.33
Census Info Call	8	0.00	3.33
Check Welfare	148	0.02	3.35
Child Center	3	0.00	3.35
Child Center, Ext	16	0.00	3.35
Child Center, Int	80	0.01	3.36
City Tree Down	1,116	0.15	3.52
City Tree Limb Down	6,045	0.84	4.36
Clean Picnic Tables	4	0.00	4.36
Cntainr near window	34	0.00	4.36
Cntainr too heavy	834	0.12	4.48
Cntnr blocking	5,995	0.83	5.31
Cntnr knocking wires	1,206	0.17	5.48
Cntnr out of postion	3,140	0.44	5.91
Cntnr overflow/bulky	10,259	1.42	7.33
Cntnr turned	1,942	0.27	7.60
Comml Dumpster, Ext	970	0.13	7.74
Comml coll after hrs	293	0.04	7.78
Const Hist No Permit	169	0.02	7.80
Const No Permit-Ext	1,935	0.27	8.07
Const No Permit-Int	887	0.12	8.19
Construction	4	0.00	8.19
Containr damaged	18,170	2.52	10.71
Containr not level	688	0.10	10.81
Containr smells bad	560	0.08	10.88
Contract Bridge Work	1	0.00	10.88

```
      Contract Park Work |          3        0.00        10.89
      Contract Pub Bldg Wk |        3        0.00        10.89
      Contract Street Work |        9        0.00        10.89
               Curb Repair |    1,034        0.14        11.03
      Cut FnceLine/TreeLwn |      592        0.08        11.11
            Cut Median-Pkwy |     547        0.08        11.19
                DOOR REPAIR |      59        0.01        11.20
           Dangerous Animal |     716        0.10        11.30
              Dangerous Dog |   2,594        0.36        11.66
          Day Care/Childcare |      3        0.00        11.66
                Dead Animal |   5,338        0.74        12.40
                Dead Dog-ACC |     53        0.01        12.40
          Dead Limbs in Park |     88        0.01        12.41
        Debris-Occupied Bldg |  14,819      2.05        14.47
          Debris-Vacant Bldg |  19,733      2.74        17.20
           Debris-Vacant Lot |  12,113      1.68        18.88
          Debris-alley/street |  18,104      2.51        21.39
           Defective Plumbing |      4        0.00        21.39
             Defective Toilet |    103        0.01        21.41
            Demo Blowing Dust |    104        0.01        21.42
        Demolition No Permit |     115        0.02        21.44
          Derelict-Privt Ppty |   5,822      0.81        22.24
           Derelict-Rt of Way |   5,353      0.74        22.99
             Did not get cart |   2,314      0.32        23.31
            Disabled Parking |     233        0.03        23.34
          Dust/Dirt Emission |       8        0.00        23.34
           ELECTRICAL INSTALL |     52        0.01        23.35
            ELECTRICAL TRACE |      12        0.00        23.35
            ELEVATOR REPAIRS |      20        0.00        23.35
                       EVENT |      16        0.00        23.35
                     EXHAUST |      14        0.00        23.36
              Electrical Insp |   1,826      0.25        23.61
          Employment Discrim |       7        0.00        23.61
             Enforce Ordinace |   9,021      1.25        24.86
                    Evictions |     445        0.06        24.92
              FH-MAINTENANCE |     646        0.09        25.01
                   FH-RUNNING |     380        0.05        25.07
                        FLAGS |       8        0.00        25.07
          FLOOR/WALL/CEILING |      78        0.01        25.08
             FURNITURE REPAIR |     44        0.01        25.08
            Fill Dirt Request |     197        0.03        25.11
           Fire Escapes-Exits |     63        0.01        25.12
               Fire Exit Insp |     164        0.02        25.14
          Food Estab. Problem |     992        0.14        25.28
```

Food worker ill	9	0.00	25.28
Foodbourne Illness	242	0.03	25.31
Foreman cntct citizn	5,358	0.74	26.06
Fountains	208	0.03	26.09
Fumes/Smells/Odors	72	0.01	26.10
GATE/FENCE	10	0.00	26.10
GENERATOR	2	0.00	26.10
GLASS/WINDOW	10	0.00	26.10
Graffiti-Park Equip	168	0.02	26.12
Graffiti-Private	9,103	1.26	27.38
Graffiti-Prvt Dmpstr	634	0.09	27.47
Graffiti-Public	2,582	0.36	27.83
HAZ MAT	1	0.00	27.83
HEAT Enrollment	12	0.00	27.83
HOLE-DEPRESSION	128	0.02	27.85
HYDRANT-HIT	665	0.09	27.94
Handicapped Parking	6	0.00	27.94
Hazrds Waste	2	0.00	27.94
Hazrds Waste, Ext	290	0.04	27.98
Hazrds Waste, Int	44	0.01	27.99
Health Center, Int	8	0.00	27.99
High Grass in Park	338	0.05	28.04
Hole-bottom of cont	5,435	0.75	28.79
Holiday Collct Schd	656	0.09	28.88
Homeless Call	13	0.00	28.88
Housing Discrim	15	0.00	28.88
Hsehld Wst Disposal	10	0.00	28.89
Idling	33	0.00	28.89
Illegal Food Estbt	179	0.02	28.92
Illegal Use	2,204	0.31	29.22
Illegal dumpg report	3,404	0.47	29.69
Illegl Use-Opn Storg	16,252	2.25	31.95
Illgal Estbt-Com San	134	0.02	31.96
Impropr resdnt displ	3,297	0.46	32.42
Inaccessible Facilty	68	0.01	32.43
Inaccessible Program	3	0.00	32.43
Incorrect Bill	3,694	0.51	32.94
Industrial Facility	4	0.00	32.94
Industrial Haz, Ext	35	0.00	32.95
Industrial Haz, Int	5	0.00	32.95
Injured Animal	264	0.04	32.99
Injured/Sick Animal	59	0.01	32.99
Inmate Complaint	26	0.00	33.00
Insects Food Ctrl	174	0.02	33.02

```
        Insp Hotel, Int |        49        0.01       33.03
       Inspect City Tree |    34,410        4.77       37.80
    Inspect Private Tree |     7,319        1.01       38.81
     Instructn hshld/blky |     3,553       0.49       39.30
        Insufficient Heat |       147       0.02       39.33
              Intake Form |       175       0.02       39.35
     KINGSHIGHWAY CLOSURE |         4       0.00       39.35
              LAWN-CAVEIN |        36        0.00       39.36
                     LEAK |        89        0.01       39.37
            LEAKING-METER |        66        0.01       39.38
                LOCK/KEYS |        82        0.01       39.39
              LOOSE-COVER |       310        0.04       39.43
             LRA Board up |     4,079        0.57       40.00
                 LRA Tree |     2,320        0.32       40.32
        Lead Hotline Call |        85        0.01       40.33
                Lead Insp |     3,367        0.47       40.80
              Leaf pick up |       338       0.05       40.84
                Leash Law |       114        0.02       40.86
            Leaves in Park |        34       0.00       40.86
            Light Damaged |     8,985        1.25       42.11
               Light(s) Out |   41,580      5.76       47.87
          Lights ON Daytime |       206      0.03       47.90
            Litter Warning |     2,040       0.28       48.18
      Long Term Initiative |       356       0.05       48.23
            MISSING-COVER |       657        0.09       48.32
            MODOT Referral |       259       0.04       48.36
        Maintain Bike Trail |        44      0.01       48.37
           Mechanical Insp |       583       0.08       48.45
       Mice Infstation, Int |       324      0.04       48.49
         Misc-Air Pollution |        30      0.00       48.50
          Misc-Animal Care |       224       0.03       48.53
            Misc-Assessor |         4        0.00       48.53
       Misc-Bd of Aldermen |         6       0.00       48.53
         Misc-Bd of Pub Svc |       288      0.04       48.57
          Misc-Building Div |       681       0.09       48.66
                 Misc-CSB |         8        0.00       48.66
        Misc-Circuit Clerk |         2       0.00       48.66
          Misc-City Courts |        19       0.00       48.67
        Misc-City Emrgcy Mng |       22      0.00       48.67
       Misc-City Jstce Cntr |         1      0.00       48.67
        Misc-Civil Rights En |        7      0.00       48.67
       Misc-Coll of Revenue |         4      0.00       48.67
        Misc-Comm Dev Admin |         1      0.00       48.67
       Misc-Comm Sanitation |       403      0.06       48.73
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Misc-Communications |	175	0.02	48.75
Misc-Comptroller |	5	0.00	48.75
Misc-Corrections |	17	0.00	48.75
Misc-Dept Human Svc |	16	0.00	48.76
Misc-Excise |	288	0.04	48.80
Misc-Facilities Mgmt |	86	0.01	48.81
Misc-Fire/EMS Dept |	79	0.01	48.82
Misc-Food Control |	103	0.01	48.83
Misc-Forestry Debris |	12	0.00	48.84
Misc-Forestry Trees |	4	0.00	48.84
Misc-Health Dir Ofc |	43	0.01	48.84
Misc-LRA |	1,504	0.21	49.05
Misc-License Coll |	717	0.10	49.15
Misc-MYR LTR |	95	0.01	49.16
Misc-Marshalls Ofc |	5	0.00	49.16
Misc-Mayors Ofc |	7	0.00	49.17
Misc-Med Security In |	2	0.00	49.17
Misc-Nbhd Stblizn Tm |	177	0.02	49.19
Misc-Ofc on Disabled |	34	0.00	49.19
Misc-Op Brightside |	123	0.02	49.21
Misc-PRF Dir Ofc |	18	0.00	49.21
Misc-Parks Div |	833	0.12	49.33
Misc-Public Safety |	4	0.00	49.33
Misc-Recorder Deeds |	1	0.00	49.33
Misc-Recreation |	26	0.00	49.33
Misc-Recycle Sectn |	55	0.01	49.34
Misc-Refuse Div |	2,021	0.28	49.62
Misc-StL Dev Corp |	2	0.00	49.62
Misc-Stl Agncy Aging |	6	0.00	49.62
Misc-Street Dept |	1,233	0.17	49.79
Misc-Street Div |	2,297	0.32	50.11
Misc-Tow Lot |	14	0.00	50.11
Misc-Traffic Div |	3,903	0.54	50.65
Misc-Trash Task Frc |	631	0.09	50.74
Misc-Treasurer |	99	0.01	50.76
Misc-Water Div |	503	0.07	50.83
Missed Cut - V Lot |	2,270	0.31	51.14
Missed Cut - VBldg |	5,402	0.75	51.89
Mold - Food Cntrl |	13	0.00	51.89
Mold, Interior |	1,975	0.27	52.16
Mosquito Breeding |	1,120	0.16	52.32
Mosquito Spraying |	3,379	0.47	52.79
Move cont/debrs dump |	1,629	0.23	53.01
Move container |	3,155	0.44	53.45

NEW CONSTRUCTION	3	0.00	53.45
NOWATER	82	0.01	53.46
NSO Block Request	1,793	0.25	53.71
New Account Insp Req	14	0.00	53.71
New Sign Requested	1,774	0.25	53.96
No Don't Plow Residn	104	0.01	53.97
No Heat, Int	515	0.07	54.05
No Hep A - Food Ctrl	16	0.00	54.05
No Hot Water, Int	313	0.04	54.09
No Interpreter	2	0.00	54.09
No Smoke Detectors	87	0.01	54.10
No Water - Food Ctrl	18	0.00	54.11
No Water Supply, Int	710	0.10	54.20
No comml dumpster	982	0.14	54.34
No response from DNR	4	0.00	54.34
No tub, shower, sink	5	0.00	54.34
Not enough cntnrs	5,521	0.77	55.11
OPERATING COSTS	1	0.00	55.11
OVERHEAD DOOR	59	0.01	55.12
Open Burning/Smoke	57	0.01	55.12
Opt Out Applctn Req	573	0.08	55.20
Other Alley Repair	1,920	0.27	55.47
Other Street Repair	3,722	0.52	55.98
Over 4 Pets	18	0.00	55.99
Over 4 Pets, Ext	853	0.12	56.11
Overcrowding	1,678	0.23	56.34
Ovrflwng littr barel	743	0.10	56.44
PAINT/PLASTER	38	0.01	56.45
PEST CONTROL	38	0.01	56.45
PLUMBING FIXTURE REP	109	0.02	56.47
POWER OUTAGE	24	0.00	56.47
PRESSURE	141	0.02	56.49
PREVENTATIVE MAINTEN	20	0.00	56.49
PROC FRAMING	25	0.00	56.50
Park Lake	49	0.01	56.50
Park Restrooms	91	0.01	56.52
Park Sewer Problem	17	0.00	56.52
Parking Lot Cndition	323	0.04	56.56
Parking Meter	88	0.01	56.57
Parking Ticket	33	0.00	56.58
Pets in restaurant	39	0.01	56.58
Playground Equipment	188	0.03	56.61
Plumbing Insp	1,390	0.19	56.80
Potholes - Alley	2,966	0.41	57.21

Potholes - Major St	4,133	0.57	57.79
Potholes - Residnl	11,517	1.60	59.38
Ppty Maint Code-Ext	23,972	3.32	62.71
Ppty Maint Code-Int	4,992	0.69	63.40
Privt Hauler Cnfirmd	426	0.06	63.46
Problem with food	403	0.06	63.51
Prohibited Animal	161	0.02	63.54
Property Damage-FIRE	8	0.00	63.54
Property Damage-FOR	1,016	0.14	63.68
Property Damage-LRA	278	0.04	63.72
Property Damage-PRK	34	0.00	63.72
Property Damage-REF	2,409	0.33	64.05
Property Damage-SDP	373	0.05	64.11
Property Damage-SDV	682	0.09	64.20
Property Damage-TLD	54	0.01	64.21
Property Damage-TOW	13	0.00	64.21
Pub Accmdtn Discrim	7	0.00	64.21
Public Nuisance Rpt	7,480	1.04	65.25
Public Swim Pool	3	0.00	65.25
Pull Illegal Sign	9,534	1.32	66.57
RECEPTACLE/SWITCH	22	0.00	66.57
RELAMP/REPAIR	113	0.02	66.59
ROOF/TUCKPOINTING	26	0.00	66.59
Rat Bite	5	0.00	66.59
Rat Infestation, Int	541	0.07	66.67
Rats (Exterior)	5,437	0.75	67.42
Rats/Mice Food Ctrl	118	0.02	67.44
Raw Garbage, Ext	4,344	0.60	68.04
Rcy Curbside Cancel	12	0.00	68.04
Rcy Delivery Missed	1,133	0.16	68.20
Rcy Info Youth Grps	3	0.00	68.20
Rcy Pilot 1 inquiry	23	0.00	68.20
Rcy Pilot 2	28	0.00	68.21
Rcy Presentation	30	0.00	68.21
Rcy curb bin damage	11	0.00	68.21
Rcy curb bin missed	104	0.01	68.23
Rcy curb bin missing	17	0.00	68.23
Rcy curb new address	26	0.00	68.23
Rcy curbbin no deliv	7	0.00	68.23
Rcy curbside new add	1	0.00	68.23
Rcy curbside new svc	616	0.09	68.32
Rcy dropoff dumping	5	0.00	68.32
Rcy dropoff litter	4	0.00	68.32
Rcy dropoff no sign	2	0.00	68.32

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 Rcy dropoff overflow |        24      0.00      68.32
 Rcy pick up svc info |       273      0.04      68.36
 Rec Bldg Maintenance |        80      0.01      68.37
         Rec Equipment |        11      0.00      68.37
      Rec Housekeeping |        23      0.00      68.38
       Rec Programming |         3      0.00      68.38
   Rec-Athletic Lights |        48      0.01      68.38
   Recycling not collec |     2,356     0.33      68.71
      Refuse Info Call |     3,358      0.47      69.18
     Refuse Svc Fee Call |     458      0.06      69.24
    Refuse not collected |  11,955      1.66      70.90
     Refuse referl to SDV |     73      0.01      70.91
     Rehab-roll off cntnr |     35      0.00      70.91
        Reminder to Trim |     85      0.01      70.92
            Remove cntnr |   1,043      0.14      71.07
              Renovation |      1      0.00      71.07
     Residnl Prvt Dmpstr |    194      0.03      71.10
       Roach Infestn, Int |    859      0.12      71.21
     Rollcart stolen/misg |  1,722      0.24      71.45
            Root Removal |     44      0.01      71.46
       SIGN INSTALLATION |      6      0.00      71.46
           SLMPD Referral |    43      0.01      71.47
         SPRINKLER REPAIR |     3      0.00      71.47
           STEAM REPAIRS |     23      0.00      71.47
            STREET-CAVEIN |    45      0.01      71.48
               SUMP PUMP |     13      0.00      71.48
     Sewer Lateral Defect |  1,614      0.22      71.70
         Shelter Comments |     2      0.00      71.70
     Short Term Initiativ |  33,940     4.70      76.41
           Sidewalk Ramp |    260      0.04      76.44
         Sidewalk Repair |   5,558      0.77      77.21
     Sign needs attention |  16,937     2.35      79.56
          Signal Bulb Out |  1,369      0.19      79.75
          Signal Damaged |   3,785      0.52      80.27
             Signal Dark |   1,553      0.22      80.49
            Signal Stuck |   1,121      0.16      80.64
         Signals Flashing |  3,760      0.52      81.17
     Signals out of sync |   1,826      0.25      81.42
         Single Light Out |  4,933      0.68      82.10
         Sirens Not Heard |     83      0.01      82.11
         Smkng Ban Issue |     195      0.03      82.14
          Smoke Detectors |     38      0.01      82.15
     Snow blkg dsabl acs |      2      0.00      82.15
     Snow/Ice - Major St |     267      0.04      82.18
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Snow/Ice - Residnl		2,927	0.41	82.59
Soulard Mkt Vendor		3	0.00	82.59
Special Event Recycl		4	0.00	82.59
SpecialEventApp		475	0.07	82.66
Speed Bump Project		3	0.00	82.66
Spray Painting		11	0.00	82.66
Sprinkler Systems		24	0.00	82.66
StRes referl to ACC		148	0.02	82.68
Stagnant Water		7	0.00	82.68
Stray Animal		4,102	0.57	83.25
Stray Animal Cntnd		118	0.02	83.27
Stray Cat		1,623	0.22	83.49
Stray Dog At Large		9,036	1.25	84.75
Stray Dog Cntnd-ACC		1,416	0.20	84.94
Stray Dog Contained		939	0.13	85.07
Street Cleaning		2,430	0.34	85.41
Street Painting Requ		758	0.11	85.51
Stump Removal		2,332	0.32	85.84
Surrender Cat		18	0.00	85.84
Surrender Dog		23	0.00	85.84
Surrender Pet		151	0.02	85.86
Swim Pool Insp, Ext		398	0.06	85.92
Swim Pool Insp, Int		21	0.00	85.92
Swine Flu Call		1	0.00	85.92
Swine Flu Psntn		20	0.00	85.92
TASTE/ODOR		85	0.01	85.94
Tent Encampment		2	0.00	85.94
Tire Storage, Ext		103	0.01	85.95
Too many cntnrs		304	0.04	85.99
Traffic Graffiti		1,817	0.25	86.25
Traffic Ticket		4	0.00	86.25
Trash in the Park		457	0.06	86.31
Trash/Grbage Fd Ctrl		81	0.01	86.32
Tree Inquiry		206	0.03	86.35
Tree Planting requst		2,897	0.40	86.75
Truck dropped litter		1,432	0.20	86.95
Unauthrz use contain		2,086	0.29	87.24
Unsanitary Cond, Ext		1,939	0.27	87.51
Unsanitary Cond, Int		1,182	0.16	87.67
Unsanitary Pets, Ext		1,997	0.28	87.95
Unsatisfy Cut - VLot		1,345	0.19	88.13
Unsatisfy Cut -VBldg		1,538	0.21	88.35
VACANT BLDG INITIV		791	0.11	88.46
VBS Inquiry		5,065	0.70	89.16

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      Vacant Unit Appeal |     2,059          0.29          89.44
     Vacnt Bldg Unsecured |    16,121          2.23          91.68
      Vcnt weed check-web |     1,902          0.26          91.94
           Vehicle Towing |       589          0.08          92.02
         Vehicle-Rt of Way |     4,295          0.60          92.62
               WALK-CAVEIN |        21          0.00          92.62
              WATER COOLER |         7          0.00          92.62
       WATER-CITZN-PROP-DAM |        57          0.01          92.63
             WTR-COMING-UP |     1,962          0.27          92.90
           WTR-VACANT-BLDG |       436          0.06          92.96
          WTRNBLDG-PIPE-REM |        31          0.00          92.97
       Wastewater, Basement |       549          0.08          93.04
           Wastewater, Ext |       293          0.04          93.08
           Water Leak, Int |       219          0.03          93.11
       Weeds-Occupied Ppty |    26,383          3.66          96.77
          Weeds-Vacant Bldg |    11,968          1.66          98.43
           Weeds-Vacant Lot |     3,475          0.48          98.91
       Whole Blk Lights Out |     3,895          0.54          99.45
                  Wildlife |         7          0.00          99.45
             Wildlife Issue |       168          0.02          99.48
           Yes Plow Residnl |     1,057          0.15          99.62
       Yrd Wste Not Collect |     2,720          0.38         100.00
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                     Total |   721,448        100.00
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