CRIME MAPPER

Galil Gertner CSCI 499 2.8.17

- Chicago has BLOCK BY BLOCK crime records from 2001-Present

ID	Case Number	Date	Block	IUCR	Primary Type	Description
1	10835360 JA137294	01/31/2017 11:55:00 PM	030XX N HOYNE AVE	031A	ROBBERY	ARMED: HANDGUN
2	10838216 JA140702	01/31/2017 11:50:00 PM	117XX S MARSHFIELD A...	1150	DECEPTIVE PRACTICE	CREDIT CARD FRAUD
3	10835363 JA137312	01/31/2017 11:49:00 PM	009XX W 72ND ST	143C	WEAPONS VIOLATION	UNLAWFUL POSS AM...
4	10835406 JA137304	01/31/2017 11:45:00 PM	011XX S AUSTIN BLVD	0460	BATTERY	SIMPLE
5	10836541 JA138567	01/31/2017 11:30:00 PM	039XX W LAWRENCE AVE	0910	MOTOR VEHICLE THEFT	AUTOMOBILE
6	10835514 JA137448	01/31/2017 11:30:00 PM	014XX W ROSEMONT AVE	1320	CRIMINAL DAMAGE	TO VEHICLE
7	10835367 JA137291	01/31/2017 11:30:00 PM	024XX E 78TH ST	0460	BATTERY	SIMPLE
8	10835405 JA137339	01/31/2017 11:30:00 PM	056XX N VIRGINIA AVE	2820	OTHER OFFENSE	TELEPHONE THREAT
9	10835343 JA137292	01/31/2017 11:24:00 PM	026XX W 51ST ST	2022	NARCOTICS	POSS: COCAINE
10	10835351 JA137299	01/31/2017 11:23:00 PM	078XX S MARSHFIELD AVE	5131	OTHER OFFENSE	VIOLENT OFFENDER:
11	10835365 JA137286	01/31/2017 11:23:00 PM	052XX W LE MOYNE ST	1310	CRIMINAL DAMAGE	TO PROPERTY
12	10837372 JA139440	01/31/2017 11:15:00 PM	032XX W BELLE PLAINE AVE	1305	CRIMINAL DAMAGE	CRIMINAL DEFACEME...
13	10835563 JA137461	01/31/2017 11:15:00 PM	105XX S VERNON AVE	0910	MOTOR VEHICLE THEFT	AUTOMOBILE
14	10835338 JA137280	01/31/2017 11:07:00 PM	034XX W MADISON ST	0820	THEFT	$500 AND UNDER
15	10835353 JA137276	01/31/2017 11:05:00 PM	039XX W 81ST PL	0486	BATTERY	DOMESTIC BATTERY S
16	10835337 JA137273	01/31/2017 11:02:00 PM	081XX S PULASKI RD	1121	DECEPTIVE PRACTICE	COUNTERFEITING DO
17	10835346 JA137282	01/31/2017 11:00:00 PM	053XX S PAULINA ST	0486	BATTERY	DOMESTIC BATTERY S
18	10835513 JA137438	01/31/2017 11:00:00 PM	001XX W HURON ST	1320	CRIMINAL DAMAGE	TO VEHICLE
19	10837853 JA137897	01/31/2017 11:00:00 PM	019XX N LEAVITT ST	0610	BURGLARY	FORCIBLE ENTRY
20	10835519 JA137451	01/31/2017 11:00:00 PM	065XX S KARLOV AVE	0810	THEFT	OVER $500
21	10836320 JA138036	01/31/2017 11:00:00 PM	032XX W DOUGLAS BLVD	1320	CRIMINAL DAMAGE	TO VEHICLE
22	10836146 JA138105	01/31/2017 11:00:00 PM	074XX S PRINCETON AVE	1365	CRIMINAL TRESPASS	TO RESIDENCE

Totals: 6264000

- Chicago provides us with very clean data.
- As the saying goes: garbage in, garbage out

Slide 2

- SODA API provided, giving updated info.

App Developers ▾   Data Publishers ▾   API Docs ▾

App Developers
Getting Started
Finding Open Data

Examples
Data Visualization with Plotly and Pandas
Data Analysis with Python and pandas using Jupyter Notebook
Using R and Shiny to Find Outliers with Scatter and Box Plots
Analyzing Open Data with SAS
Building SMS Applications with Twilio
Forecasting with RSocrata
Making a heatmap with R
Create a column chart with Highcharts
Generating a within_box() query with Leaflet.js
Using a jQueryUI date slider to build a SODA Query
Data Analysis with Python, Pandas, and Bokeh
Animated Heatmap with Heatmap.js
Build a physical "Traffic Light"
Google Maps Mashup
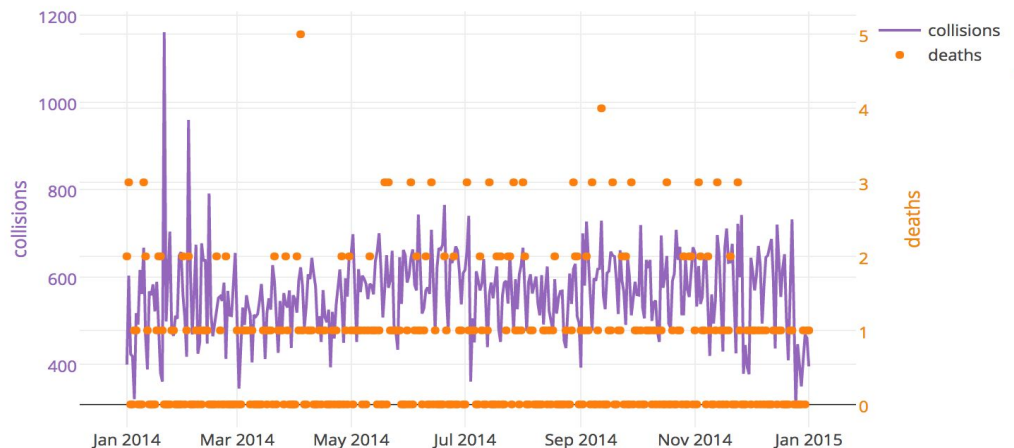Google Maps with KML
Simple column chart with D3

SDKs & Libraries
PhpSoda
Google Android
.NET

NYC Vehicle Collisions and Deaths per day

— collisions
● deaths

EDIT CHART

We can apply for an API key and possibly get lots of access to streaming data.

Slide 3

How will we aggregate our Data????

- We want to make a map of Chicago with color highlighting indicating levels of different crimes in each area.

How will we calculate crime level????

- We want to calculate a **BLOCK SCORE** in each category.

    - Frequency of similar crime
    - Variance from city average
    - Severity of crime (Average crime score)
    - *How long since last occurrence of crime**
    - *Score of neighboring blocks**

- Associate a range of block scores to color intensities.

* Dampening factors

Questions?