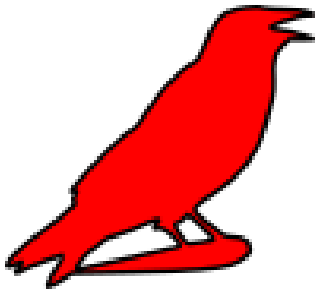


CrowTrax

A GIS for Crow Attacks

Jim O'Leary

Outline

- Why I did it
- What it looks like
- How people responded
  - Media response
  - Public response
- What's under the hood
- What is the future of single-purpose geo-apps

Why I Did It

Why I Did It

- Crows are nice
- Except in spring
- Crows are not nice
  - Protect fledgling crows
  - Attack anything near
    - and far

Why I Did It

- Downtown Vancouver
- Many trees
- Many crows
  - Right outside our building

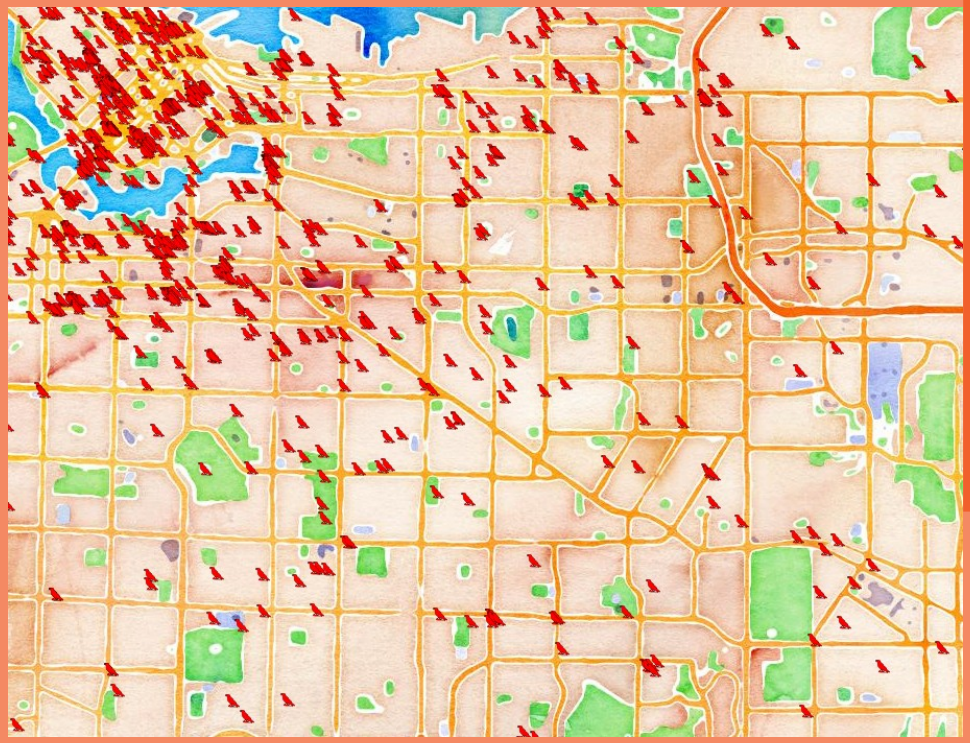
Why I Did It

Sign in front of
814 Richards Street,
Spring, 2015

- Spring 2015
- Many people-crow collisions
- Let's track those crows!

Why I Did It

- Langara College
- New GIS Program
- A little publicity?
- Sorry to plug my product!



Demo

Demo

- CrowTrax Website
- http://giscourses.net/crowtrax/crowtrax.html

How People Responded

How People Responded

- **Media response**
- 24 Hours

How People Responded

- **Media response**
- CBC
- Message sent:
  - "GIS is useful"
  - "Open Source is useful"
- News report
  - "Beware of crows"
  - "Alfred Hitchcock"

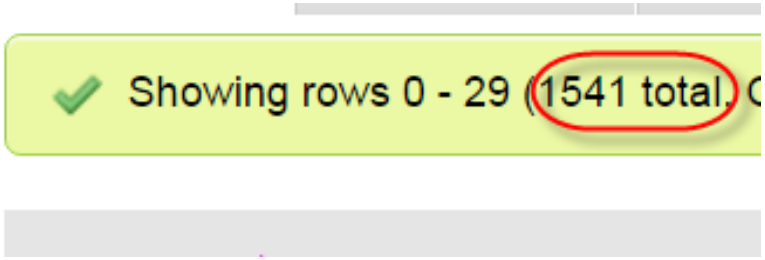
How People Responded

- **Public response**
- Crows attack:
  - Other birds
  - Cats
  - Dogs
  - Squirrels

How People Responded

- **Public response**
- Traumatic experience
  - "Attacked from behind"
  - "10 years ago"
- Personalized
  - "On their list"

How People Responded



- **Public response**
- Expected 200 responses
- Received over 1,500 legitimate responses
- Several hundred bogus responses

How People Responded

- Victoria called
- Magpie season in Australia
- BBC World Service?

What's Under the Hood

CrowTrax
A GIS for Crow Attacks

Langara.
THE COLLEGE OF HIGHER LEARNING.

Under the Hood

http://giscourses.net/crowtrax/crowtrax.html

- Leaflet API
  - Unlimited usage
  - http://leafletjs.com/
- Google Maps
  - Free until exceeding 25,000 map loads per 24 hours

Under the Hood

- Google Fusion Tables
  - 25,000 requests per day
  - 250 MB per table

https://fusiontables.google.com/DataSource?docid=1Y9ldKq7uC1k_oW0psaJ8BjPMbfCqWQOcNs6ptcGw#rows:id=1

Under the Hood

- Spatial query with MYSQL

```
on, aggressiveness,x,y, date_entered
FROM reports
WHERE
VERIFIED = 'Y'
AND
description <> ''
AND
MBRContains(geomfromtext('POLYGON((-122.94696807861327
49.206607421480605, -123.15296173095703 49.206607421480605, -
123.15296173095703 49.29344891062533, -122.94696807861327
49.29344891062533, -122.94696807861327
49.206607421480605))',4236),geometry) = 1
```

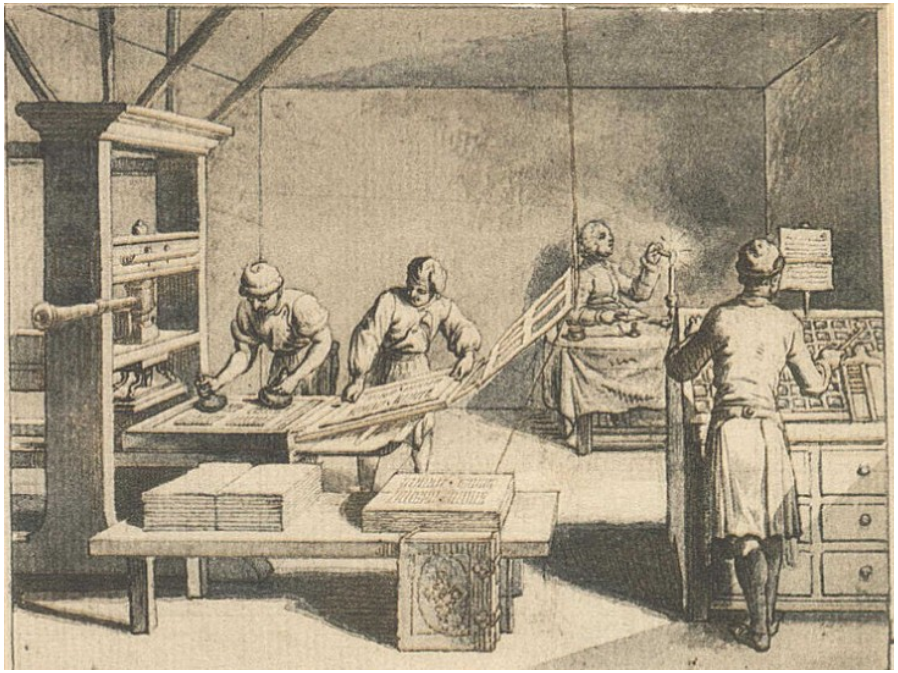
“to boldly go where no man has gone before”

Future of Single-Purpose Geo-Apps

Future of Single-Purpose Geo-Apps

- **How to make GIS popular?**
- Academic approach does not work
- Has to meet a need
- CrowTrax hit a nerve
  - A crow attacked me
  - Who cares about GIS?

Future of Single-Purpose Geo-Apps



- Printing press (1440)
- Revolutionized exchange of information
- Only wealthy could print

Future of Single-Purpose Geo-Apps

Xerox 914

- Photocopier (1959)
  - Revolutionized printing
  - Now everyone can print!

Future of Single-Purpose Geo-Apps

- GIS = Enterprise
  - I don't mean Starship Enterprise
- Government
- Oil
- Mining

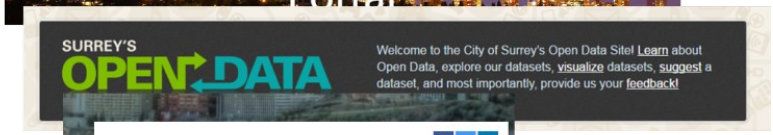
Future of Single-Purpose Geo-Apps

- Open source GIS packages
  - Leaflet
  - OpenStreetMap
  - PostGIS
  - QGIS
  - Fusion

Future of Single-Purpose Geo-Apps

ArcGIS Open Data

CKAN



Socrata

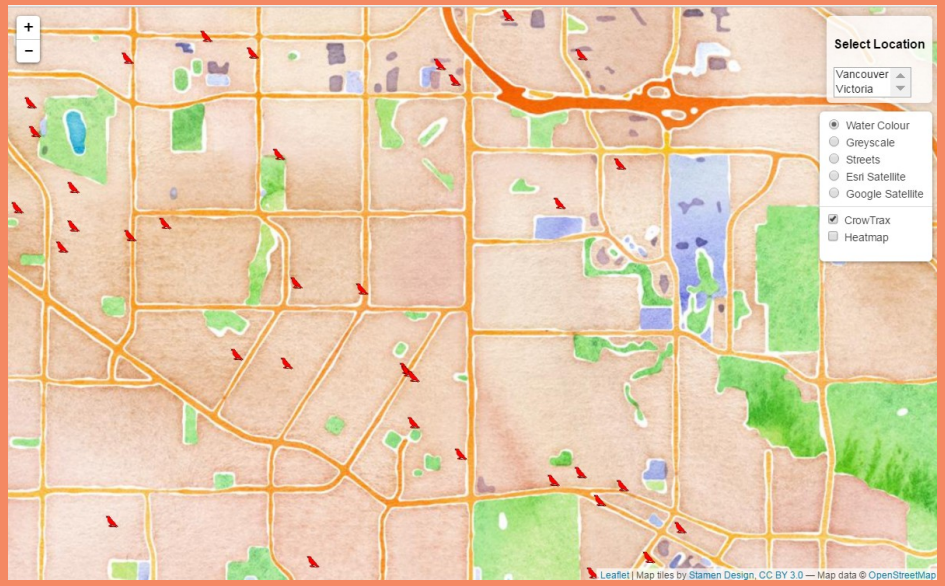
- Open Data management systems
  - Search
  - Analyze
  - Create
  - Stream

Future of Single-Purpose Geo-Apps

- "Mr. Scott, we need warp speed now!"

Thank you!

Questions?


Select Location
Vancouver
Victoria
Water Colour
Greyscale
Streets
Esri Satellite
Google Satellite
CrowTrax
Heatmap
Leaflet | Map tiles by Stamen Design, CC BY 3.0 — Map data © OpenStreetMap

Demo

Demo

Select Location
Vancouver
Victoria
Water Colour
Greyscale
Streets
Esri Satellite
Google Satellite
CrowTrax
Heatmap
Leaflet | Map tiles by Stamen Design, CC BY 3.0 — Map data © OpenStreetMap

Demo

Select Location
Vancouver
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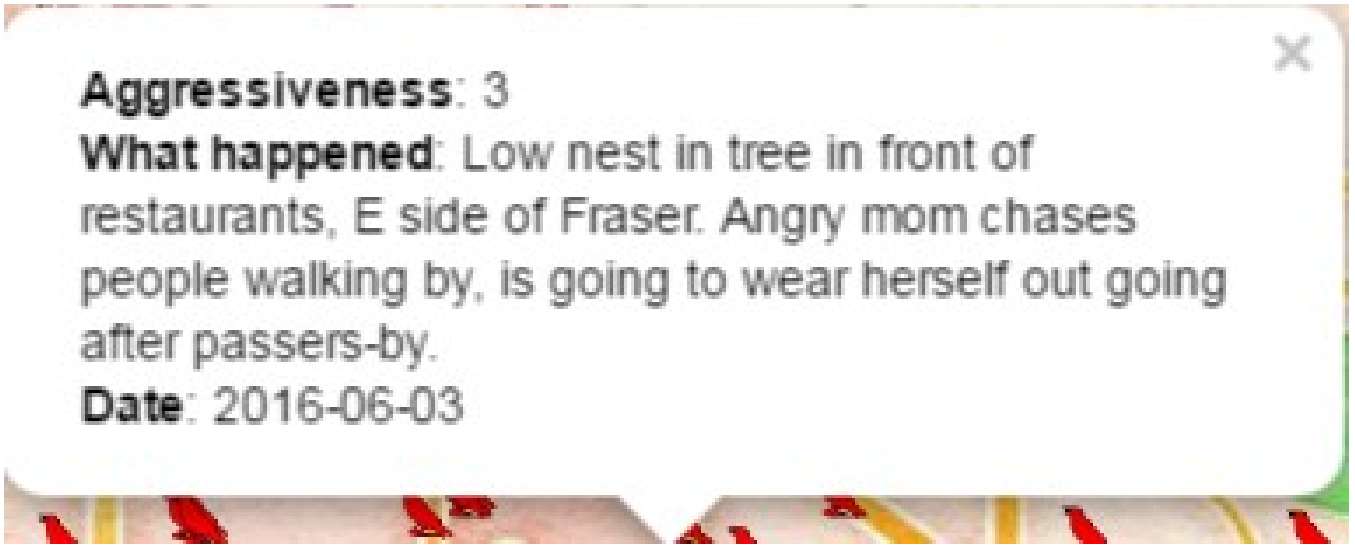
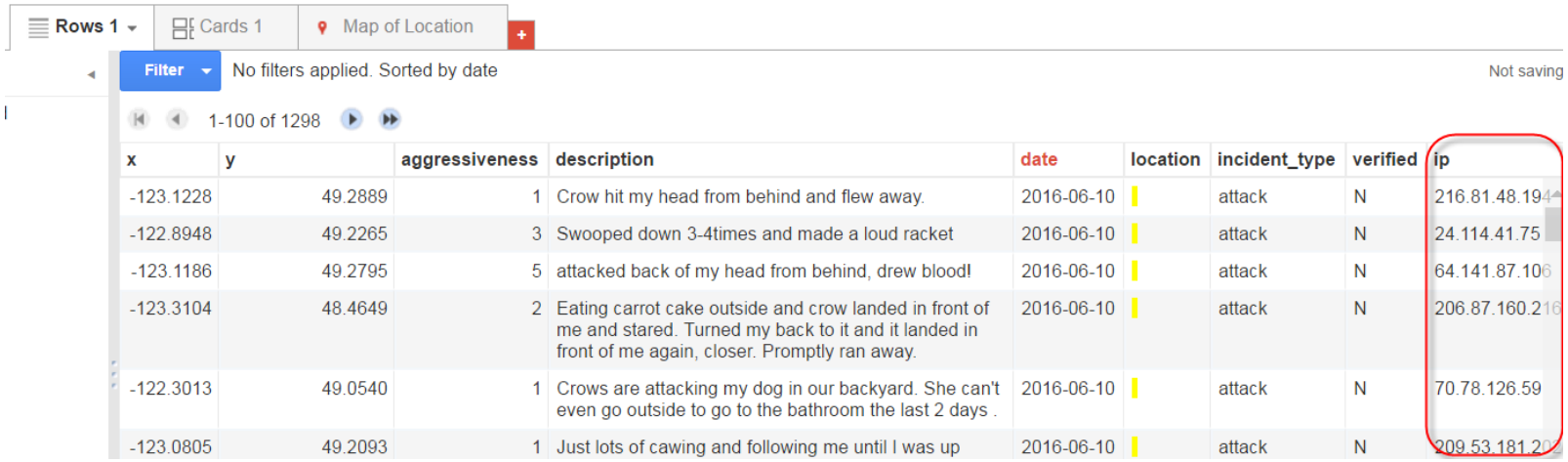
Demo


Aggressiveness: 3
What happened: Low nest in tree in front of restaurants, E side of Fraser. Angry mom chases people walking by, is going to wear herself out going after passers-by.
Date: 2016-06-03

Media Response

Media Response

Under the Hood


Rows 1 | Cards 1 | Map of Location

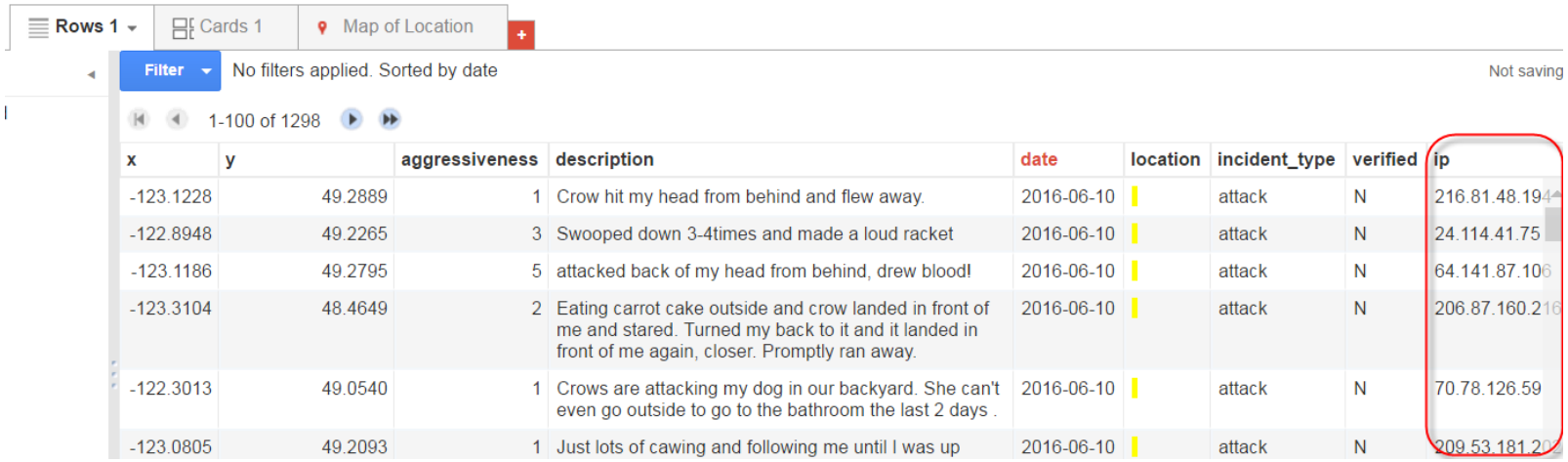
Filter | No filters applied. Sorted by date | Not saving

1-100 of 1298

x	y	aggressiveness	description	date	location	incident_type	verified	ip
-123.1228	49.2889	1	Crow hit my head from behind and flew away.	2016-06-10		attack	N	216.81.48.19
-122.8948	49.2265	3	Swooped down 3-4times and made a loud racket	2016-06-10		attack	N	24.114.41.75
-123.1186	49.2795	5	attacked back of my head from behind, drew blood!	2016-06-10		attack	N	64.141.87.106
-123.3104	48.4649	2	Eating carrot cake outside and crow landed in front of me and stared. Turned my back to it and it landed in front of me again, closer. Promptly ran away.	2016-06-10		attack	N	206.87.160.216
-122.3013	49.0540	1	Crows are attacking my dog in our backyard. She can't even go outside to go to the bathroom the last 2 days .	2016-06-10		attack	N	70.78.126.59
-123.0805	49.2093	1	Just lots of cawing and following me until I was up	2016-06-10		attack	N	209.53.181.20

- Google Fusion Tables
- Same usage as Google Maps

Under the Hood



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-123.3104	48.4649	2	Eating carrot cake outside and crow landed in front of me and stared. Turned my back to it and it landed in front of me again, closer. Promptly ran away.	2016-06-10		attack	N	206.87.160.2
-122.3013	49.0540	1	Crows are attacking my dog in our backyard. She can't even go outside to go to the bathroom the last 2 days .	2016-06-10		attack	N	70.78.126.59
-123.0805	49.2093	1	Just lots of cawing and following me until I was up	2016-06-10		attack	N	209.53.181.2

- Switch to MySQL
- Allows spatial queries

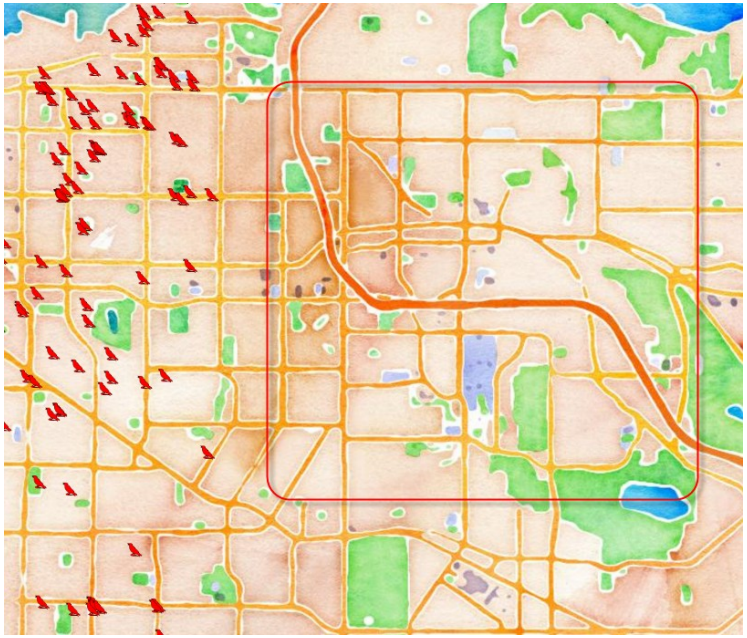
Under the Hood

- Dragging…

Under the Hood

- Drag end…

Under the Hood



- Drag end…