

Project 2 Proposal

Project team:

- Amber Van Harskamp
- Mathew Johnson
- Leanne Porter

Topic: Victorian Crime Statistics

Rationale: Large amounts of data available and the type of data allows for a greater variety of graphs to be developed. Project creators are all based in Victoria providing insights into local neighbourhoods.

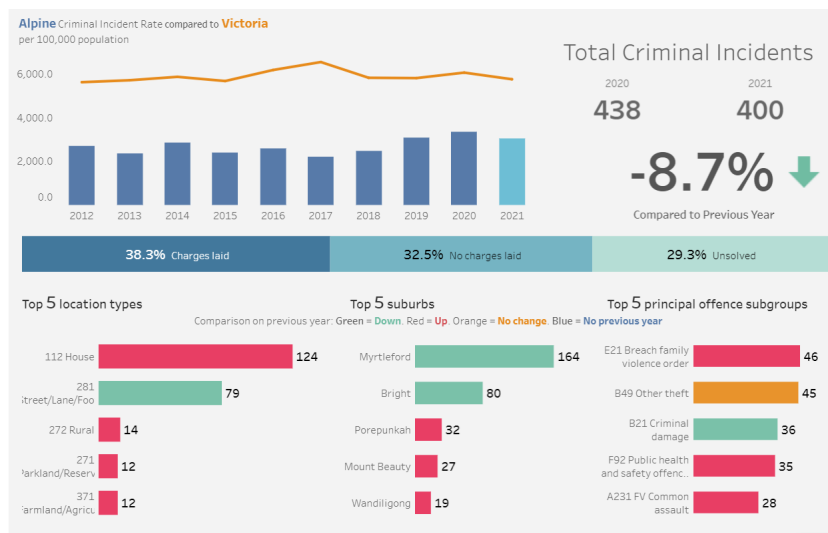
Data Source:

<https://www.crimestatistics.vic.gov.au/crime-statistics/latest-victorian-crime-data/download-data>
Data Tables - LGA Criminal Incidents Visualisation - year ending March 2021 (XLSX, 17.3 MB)
TAB 2 OR 3 - Data to be investigated before deciding.

Visualisation Inspiration:

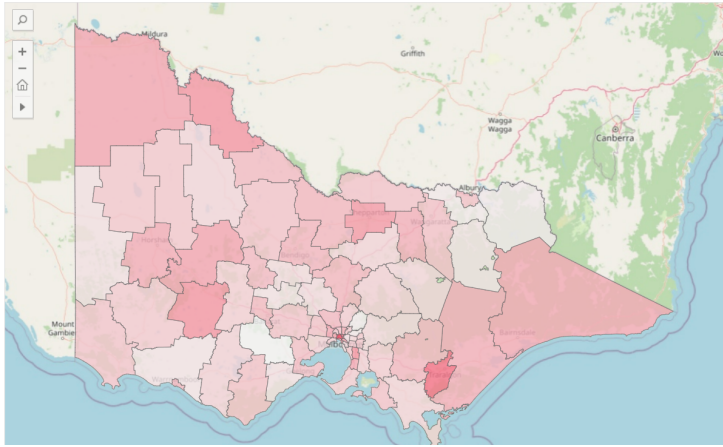
1) Bar graphs based on a user selection.

<https://www.crimestatistics.vic.gov.au/crime-statistics/latest-crime-data-by-area>



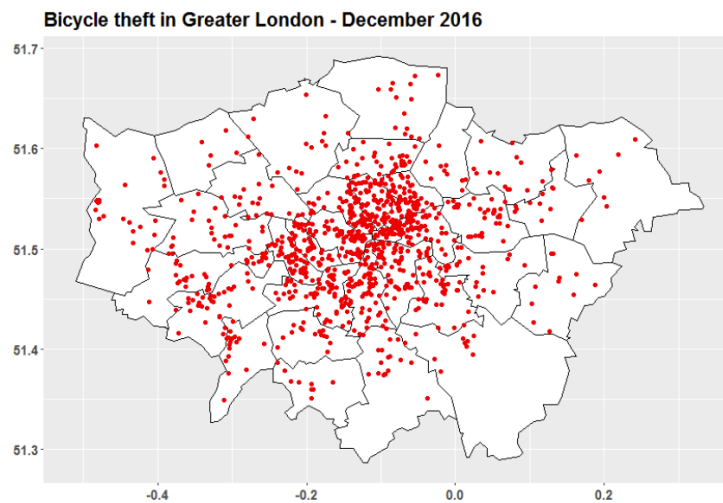
2) Heat / color map of Victoria with color scale and legend.

<https://flowingdata.com/2009/06/23/20-visualizations-to-understand-crime/>
<http://crimetool.bocsar.nsw.gov.au/bocsar/>



3) Map of VIC with dots or pointers that identify areas of interest.

<https://towardsdatascience.com/plotting-a-map-of-london-crime-data-using-r-8dcefef1c397>



4) Filtered table data based on user input.

Filter Search	Date	City	State	Country	Shape	Duration	Comments
Enter a Date 1/4/2010	1/4/2010	glen spey	ny	us	flash	35 mins	colorful flashing craft hovers for 30mins & then flashes violet, followed by dashing to the right & disappearing
Enter a City benton	1/4/2010	reedville	va	us	changing	abt 1 hour	Spherical flashing lights, hovering in the northwestern sky, no sound. ((NUFORC Note: Possible sighting of celestial body?? PD))
Enter a State ar	1/4/2010	cleveland	oh	us	triangle	downtown	is it a ufo
Enter a Country us	1/4/2010	whittier	ca	us	light	3 seconds	Thick bright light travels across southern California then disappears?
Enter a Shape circle	1/4/2010	ben wheeler	tx	us	light	2-3 minutes	Very bright light, flying lower than a jet; appeared to be tracking another light. ((NUFORC Note: Satellites?? PD))
Filter Table	1/4/2010	san pablo	ca	us	unknown	4 hours	Extremely high, hovering object blinking various colors with red light on top seen from San Pablo. ((NUFORC Note: Sirius?? PD))
Reset Data	1/4/2010	cedar rapids	ia	us	light	15 min	Two very bright white lights come close together in the northwest sky and one dissapears...
	1/4/2010	el cajon	ca	us	light	noticed from dusk to dawn	"Fake stars" over San Diego, CA

Visualisation tools:

- Javascript
- Chart.js ? Plotly
- D3.JS
- Bootstrap / Bootswatch theme
- Mapbox
- Leaflet
- HTML/CSS

Dashboard interaction:

- Drop down menu selector to update graphs
- User input box to filter crime data based on LGA/suburb/postcode area (returns table data)
- Latest news headline scrapping (user clicks button to return latest headlines), with a time stamp showing when it was last updated.

Project outline: (see next page)

Dashboard outline: (see last page)

Github link: <https://github.com/LP-116/Project-2>

PROJECT OUTLINE

Objective: Create a user-friendly, interactive dashboard to explore Victorian crime data.

Team members: Mathew Johnson, Amber Van Harskamp, Leanne Porter.

PART 1:

ETL

EXTRACT

DATA.GOV.AU
CSV FILES



TRANSFORM

Clean up using
PYTHON/PANDA'S



LOAD

Creation of SQL database
(tables, diagram, PK/FK).

Loading of data via
python/pandas.



PART 2:

CREATION

CREATE DASHBOARD

APP

Python Flask App
BeautifulSoup & Splinter (news headline)
SQLAlchemy

Scope:

APP API route returns data from database in json format. JSON data is then used for creation of graphs.

Visualisations

Tools for creation:

D3.JS
CHART.JS? PLOTLY?
BOOTSTRAP
MAPBOX

LEAFLET
HTML/CSS/JS
BOOTSWATCH



PART 3:

DEPLOY

DEPLOY



Interactive dashboard

Deployed via Heroku.

User has the ability to
filter data via crime
type and location.

Maps and graphs will
be generated based on
user selection.

Project files uploaded
to github:

<https://github.com/LP-116/Project-2>

TITLE

Logo - link

Data

 News headline

User input fields

Graph 1

Graph 2

Graph 1

Footer

TITLE – Data link

Logo - link

Data

User input fields

Filtered table data

Footer