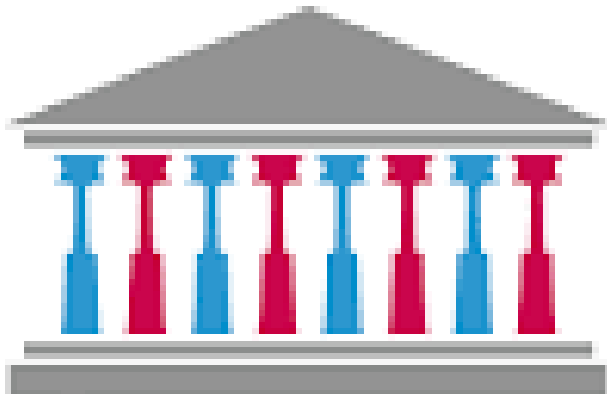




Safer Victorian Roads



GovHack
empower enable connect

Team
Super_Road_Analytics

Can We Make Victorian Road Safer !!

Shampa Shahriyar
Mingxia Zhu

Team Members

Mingxia Zhu
Business Analyst
Elegant Media



Govhack Melbourne @govhackmelb · 19h

Team SUPER_ROAD_ANALYTICS working hard on making Victorian roads safer using data from @VicRoads @TACVictoria @WorkSafe_Vic
#GovHackMelb

Dr Shampa Shahriyar
Teaching Associate
Monash University



Dataset

- Fatal Crashes - Lives Lost, Last 5 Years to Date
- Road Works and Events Current Points
- Crashes Last Five Years
- Victorian LGA data

Motivation for Hack

Crash



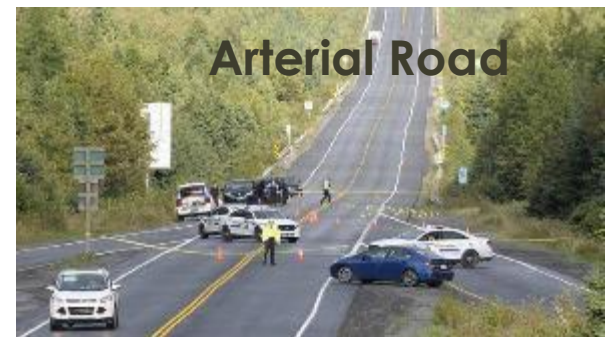
Friday Night



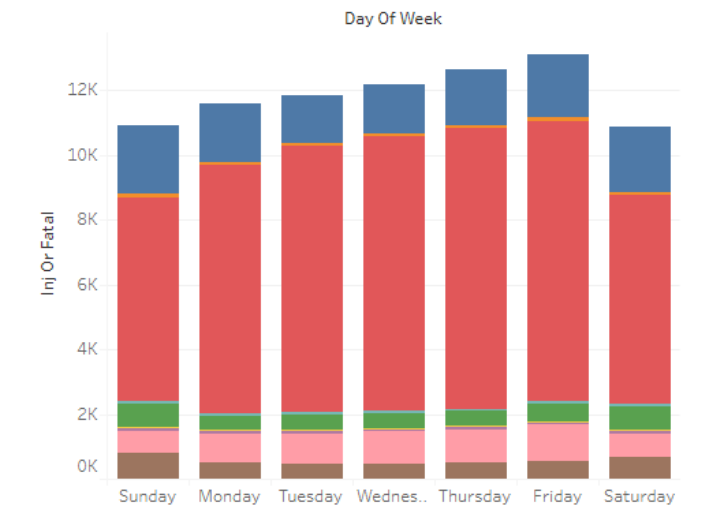
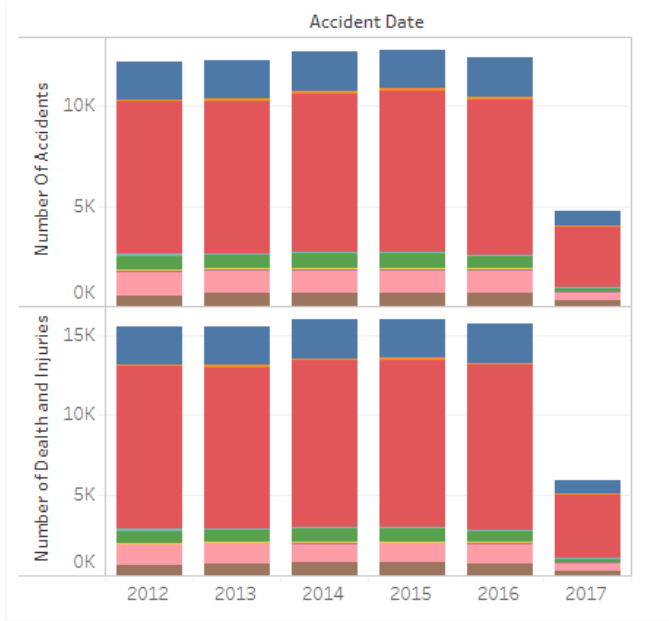
Cross Intersection



Arterial Road



Accidents Stats for Victoria

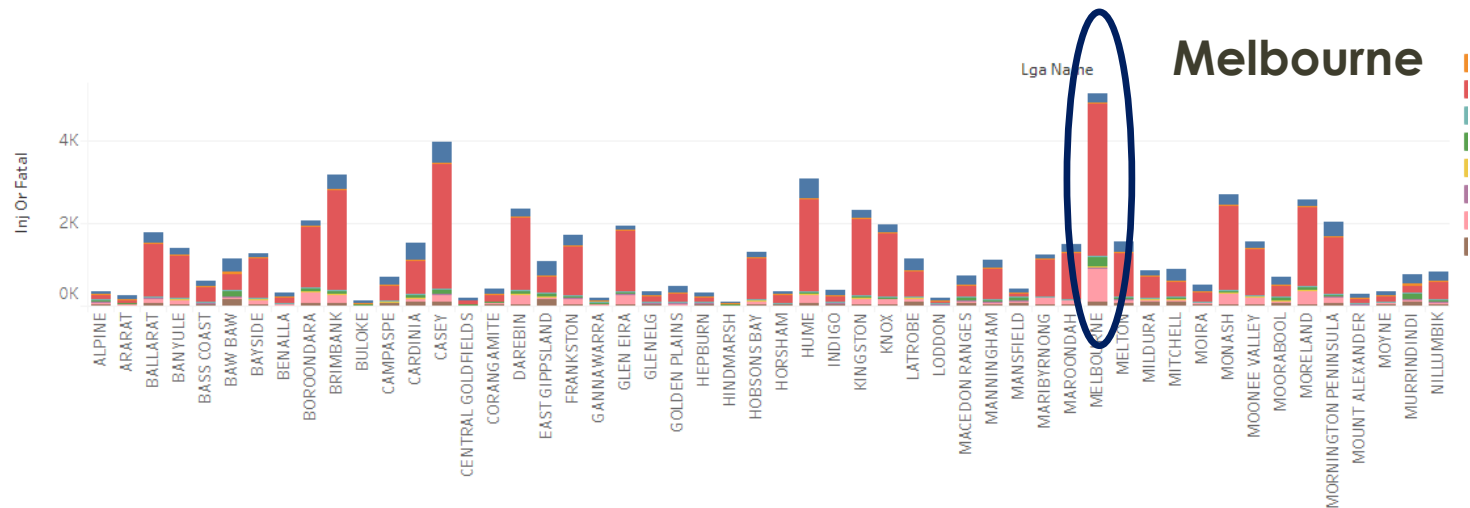
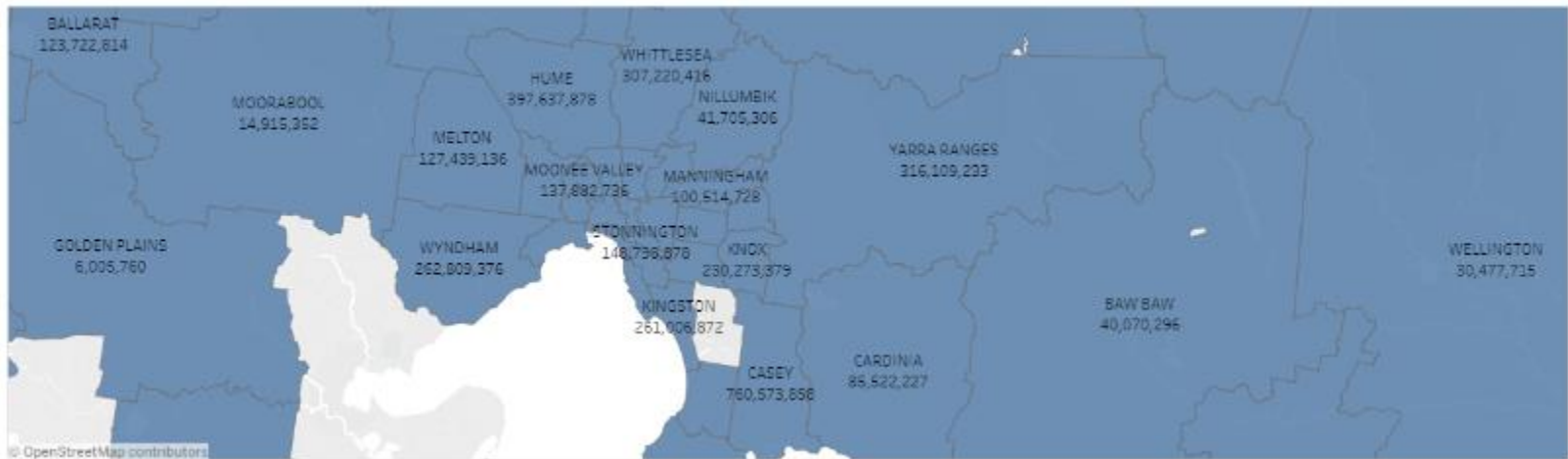


Accident Type

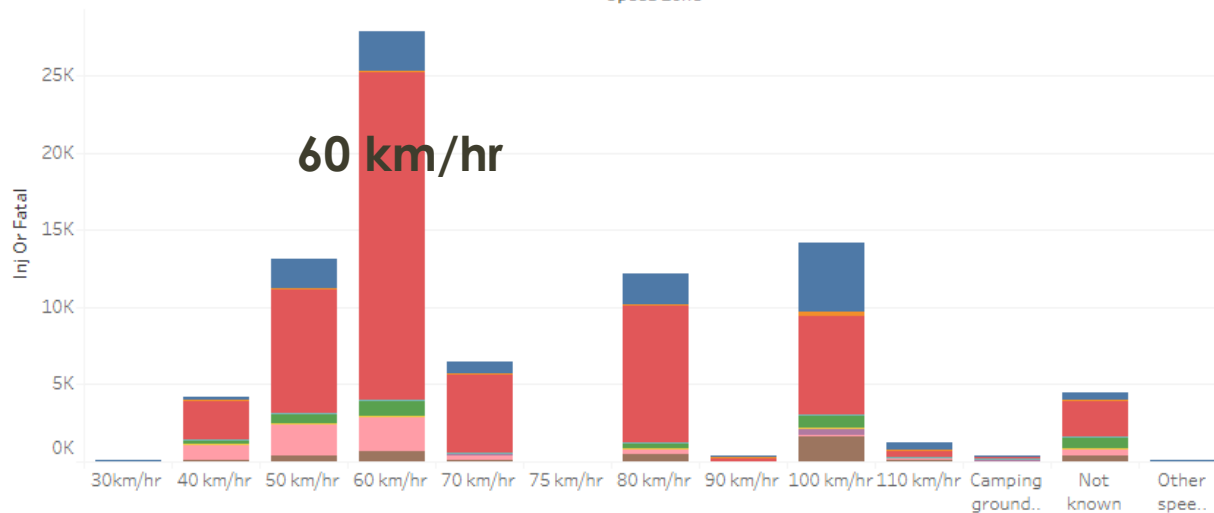
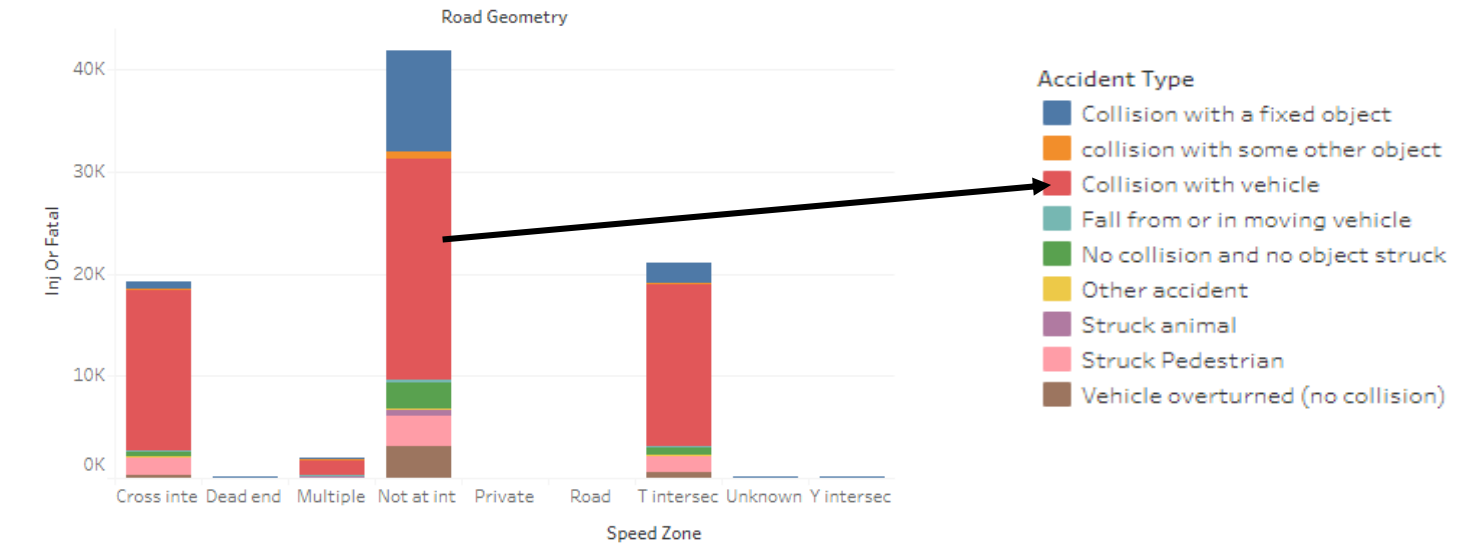
- Collision with a fixed object
- collision with some other object
- Collision with vehicle
- Fall from or in moving vehicle
- No collision and no object struck
- Other accident
- Struck animal
- Struck Pedestrian
- Vehicle overturned (no collision)

Accident prominent LGAs

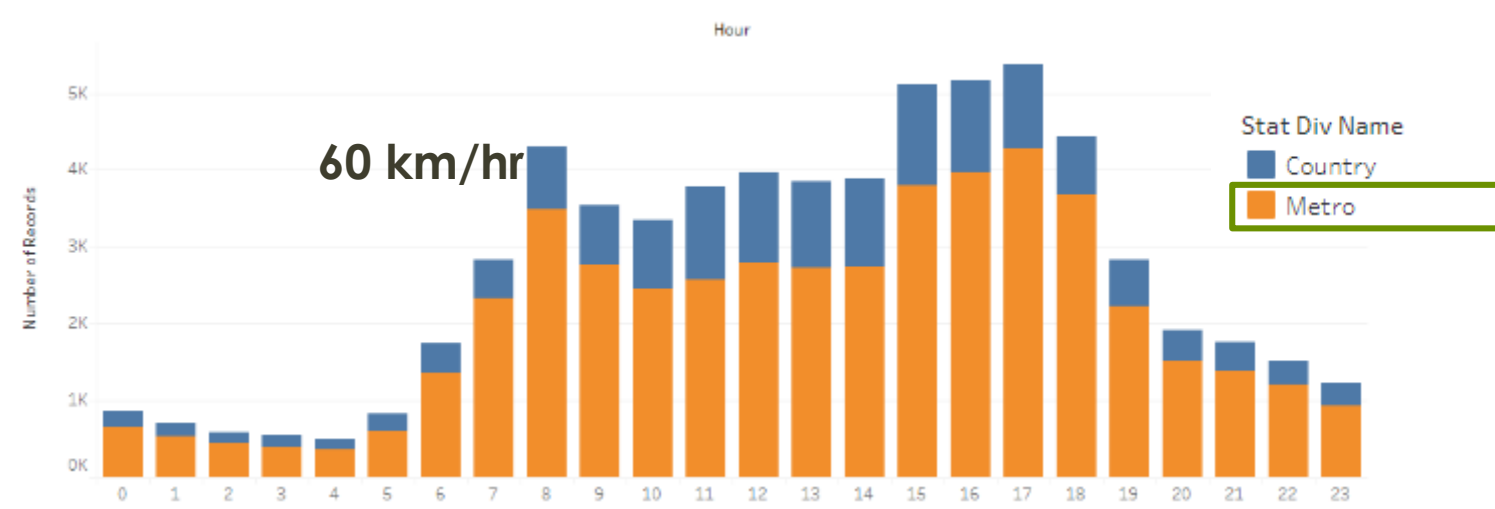
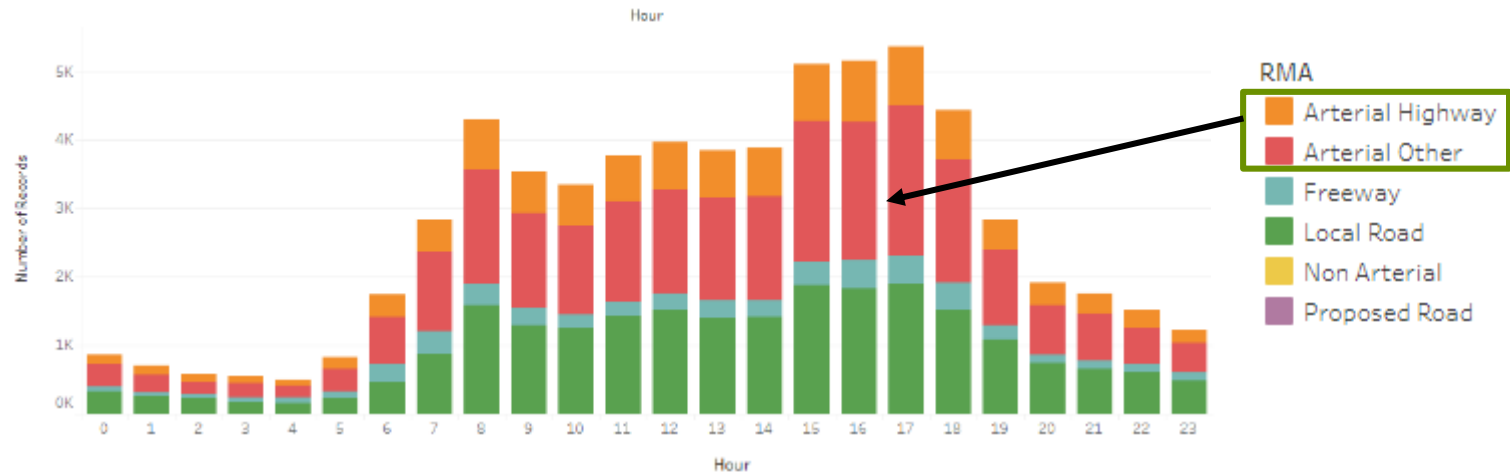
LGA and population





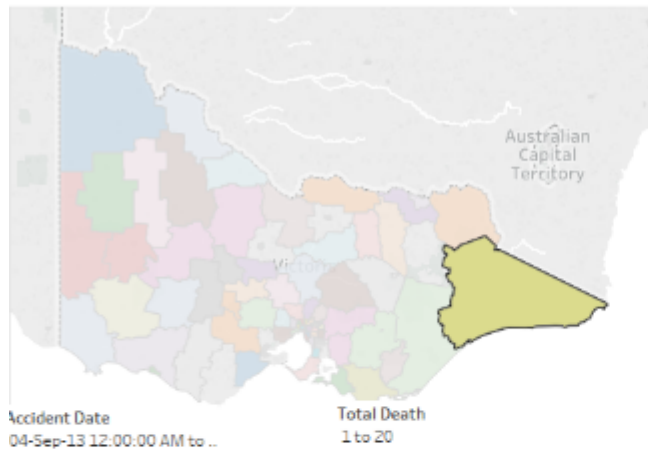


Places prominent for Accident

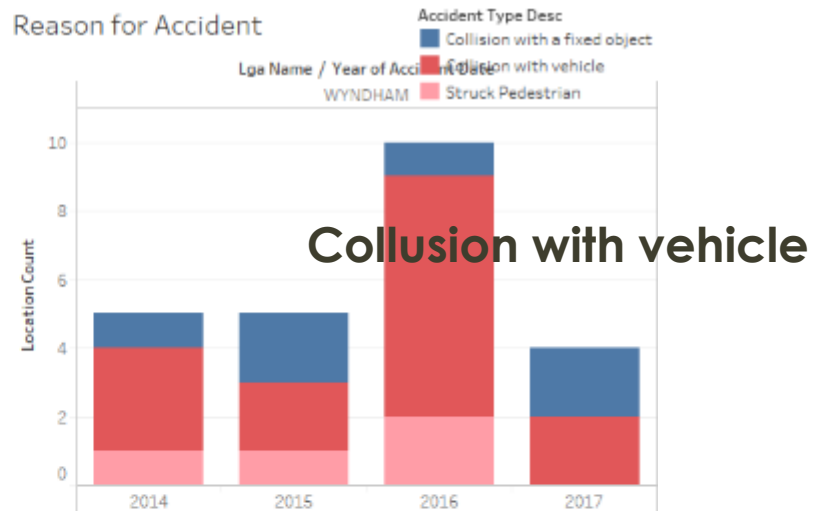


Death Incidents

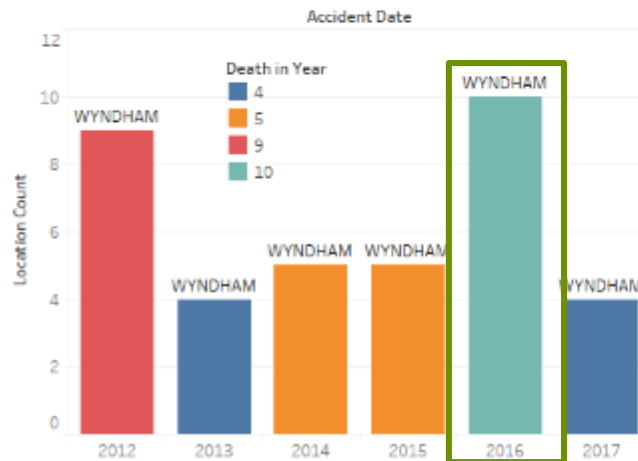
Local Government Area



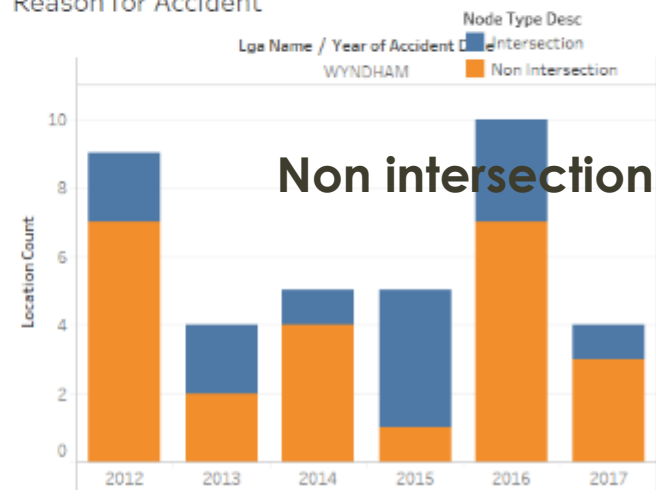
Reason for Accident



Death Statistics of Local Government Area

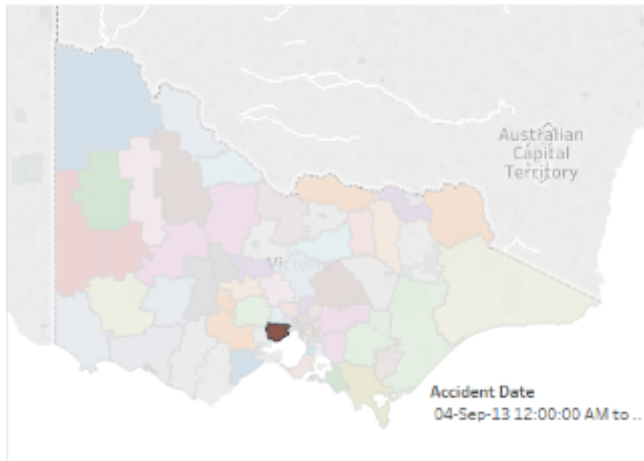


Reason for Accident

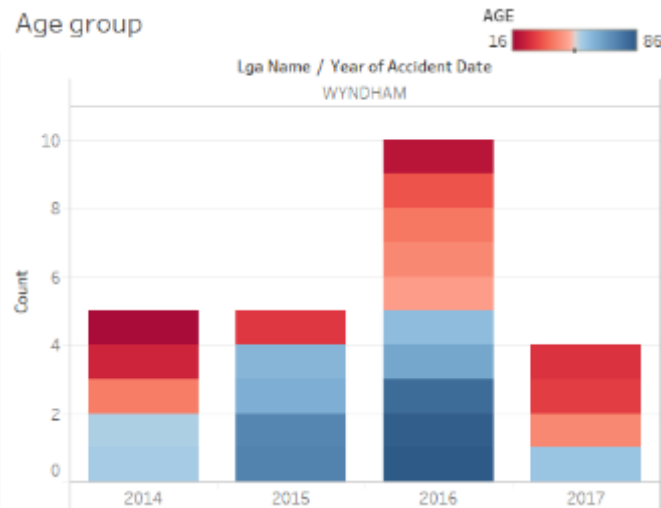


Victims

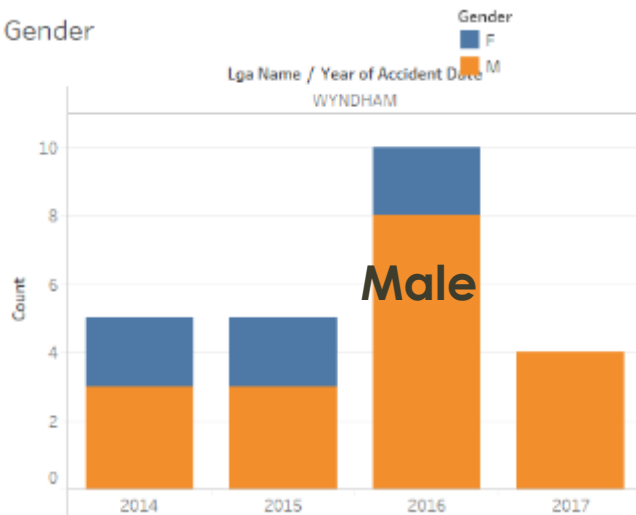
Local Government Area



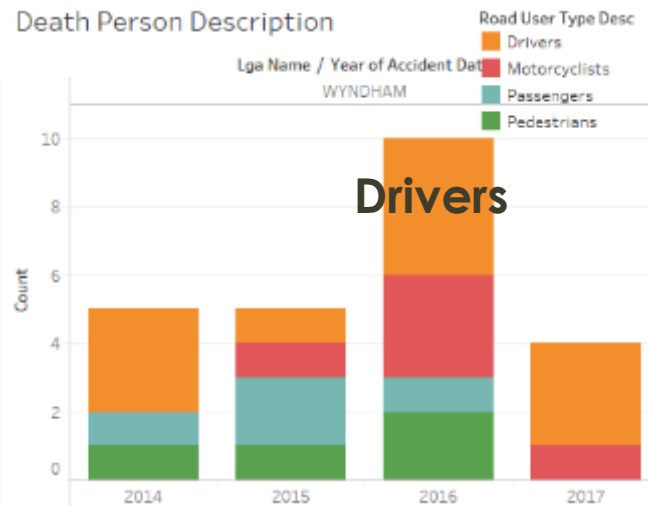
Age group



Gender

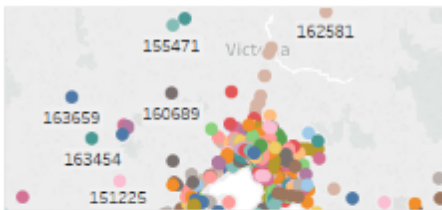


Death Person Description

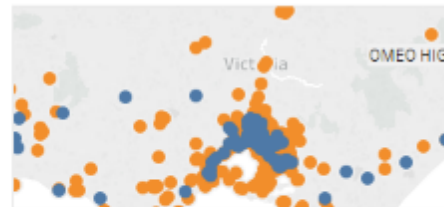


Road Works Affecting Traffic

Roads



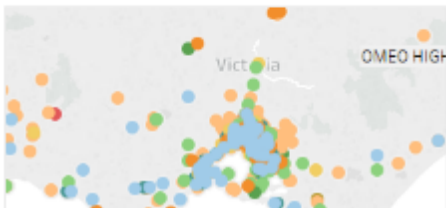
Road Closure Work Duration



Rwe Start Date
06-Sep-13 12:00:00 AM to ..

Rwe End Date
18-Jul-17 12:00:00 AM to ..

Road Closure Type



Rwe Closure Type

- 1 lane closed both directions
- 1 lane closed eastbound
- 1 lane closed greensborough bound
- 1 lane closed inbound
- 1 lane closed northbound
- 1 lane closed outbound
- 1 lane closed southbound
- 1 lane closed westbound
- 2 lanes closed both directions

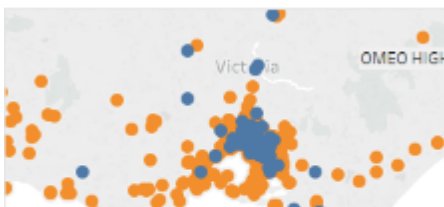
Works Type

- continuous works
- daily works

Subject Pref Rdname

- ABECKETT STREET
- AHERN ROAD
- AITKEN BOULEVARD
- ALBERT ROAD
- ALBERT STREET
- ALEXANDRA AVENUE
- ALEXANDRA PARADE
- ANDERSONS CREEK ..
- ANGLESEA ROAD
- ASCOT VALE ROAD
- ASHLEY STREET
- AUBURN ROAD
- BACCHUS MARSH R..
- BACCHUS MARSH-G..
- BALACLAVA ROAD
- BALCOMBE ROAD
- BALLAN ROAD
- BALLARAT ROAD
- BALLARTO ROAD
- BALSTON STREET
- BAMBRA-AIREYS IN..
- BANGS STREET
- BANNOCKBURN-SH..
- BARKERS ROAD
- BARKLY STREET
- BARRY ROAD

Road Closure Status



Rwe Status

- Active
- Pending

Traffic Delay For Road Closure



Traffic Delay

- 0 to 5 min
- 6 to 10 min
- Greater than 10 min

Traffic Delay

Mockup App to Escape Road Diversion

Google Map Journey Plan



If there is a road work or accident during the journey, there will be a pop-up alert shown as follows, which is used to inform the users. Meanwhile, there will also be a voice notification to remind the user.

Road closed / Accident
happened in La Trobe St
between Swanston St and
Russell St. Plan a new
route?

No

Yes

Limitations & Future Work

- Due to time constraint, we have not considered more factors which are
 - Traffic Signaling
 - Traffic Density
 - Road Structure
 - Pedestrian Movement
- Future Target :
 - Consider all factors and make a prediction model for accident
 - Some strategy to reduce accidents
 - Escape path while road work or incidents
 - LGA based suggestion to improve road safety

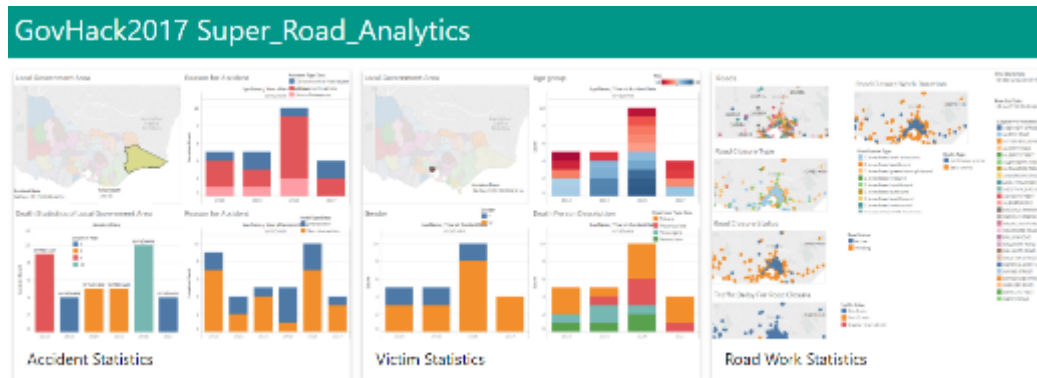
Suggestion to VicRoads, TAC & WorkSafe Victoria

- More speed cameras/precautions in 60 speed zone
- Make better route plan for peak hours based on peak locations
- Precautions for identified accident zones specially arterial roads and cross intersections

Project Details

- **Project website**

- <https://shampa077.github.io/GovHack2017VICRoadFatalAccident/>



- **GitHub**

- <https://github.com/shampa077/GovHack2017VICRoadFatalAccident>

- **Tools & Programming Language**

- Tableau
- Html & JavaScript
- Balsamiq Mockups

Journey of #GovHack2017

