



Healing Australia from COVID-19



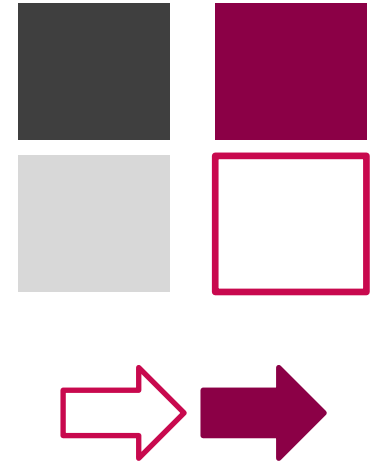
Data Rookies (Team 46)

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- Akar Gupta
- Anurag Dinesh Karmarkar
- Chinmay Karangutkar
- Cleon Rodrigues
- Rahul Halappanavar

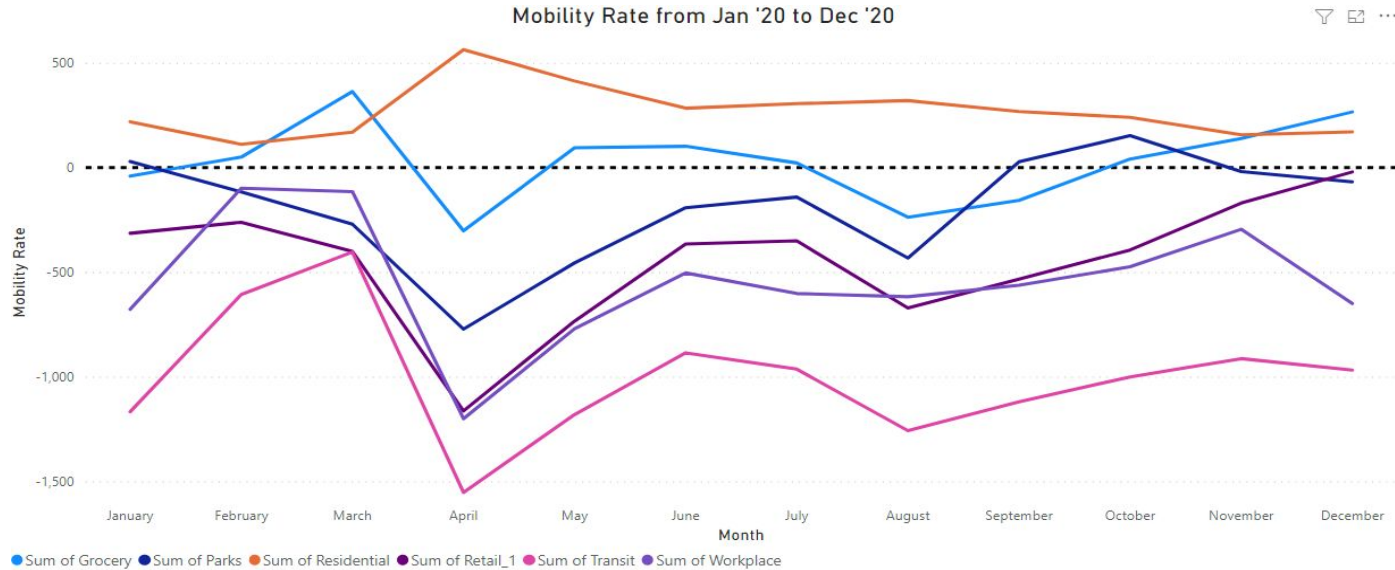


Hypothesis Slide

- **Team:-** Data Rookies
- **Challenge:-** Using the data at hand, we want to explore the possibilities in which Australia can recover after a massive streak of lockdowns due to the COVID19 pandemic.
- **Objectives:-** We intend to analyze various factors that may have been impacted due to the lockdowns. The factors include the mobility of people, employment in various industries and trends in house rents and sales. After meticulous analysis of these factors, we will propose some suggestions to the problem in the 'conclusion and solutions' slide.
- **Process:-** We have used the datasets provided by the organisers to analyze the problem and create some visualizations. The tools such as SAS and RStudio were used to create the visualizations and perform the analysis.

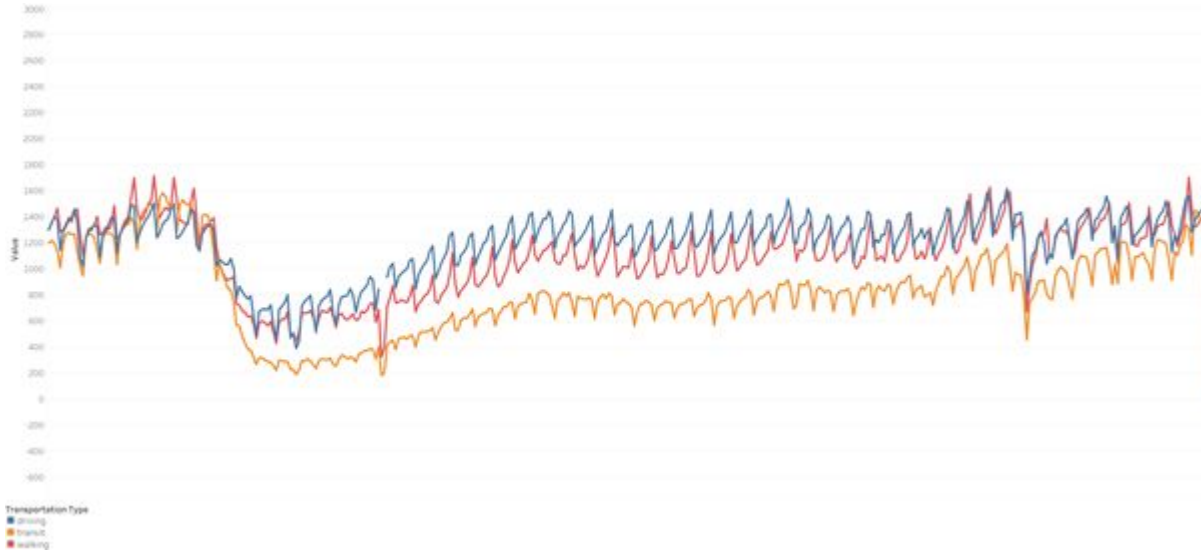


Google Mobility Data for Victoria Jan 2020 to Dec 2020

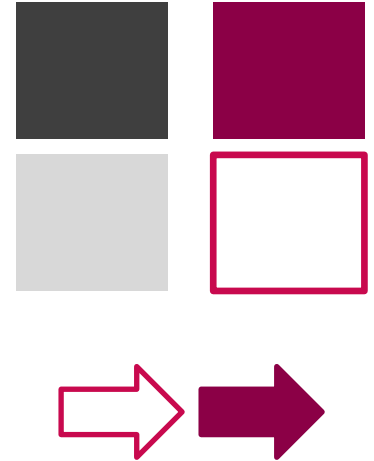


- 2 major dips in mobility across the year, first in March and second in July.
- Traveling and visiting to places reduced to below normal.
- Public transport mobility was worst hit, along with travel to workplaces decreased drastically.
- Travel to grocery stores and residential remain well above the normal line.
- Travel to workplace still struggle in covid normal as people are used to working from home.

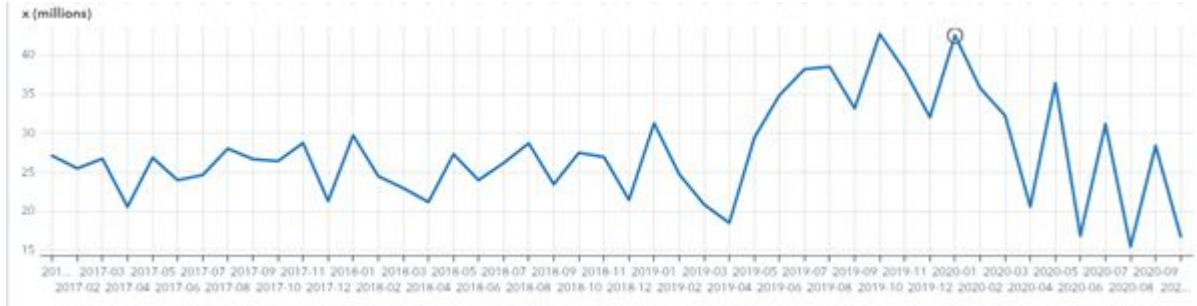
Mobility of People and Vehicles according to Apple Mobility Dataset



- Decrease in General mobility such as walking and driving due to imposition of lockdown and night curfew.
- Decrease in number of people traveling to work which lead to lesser people using public transport to travel to work.

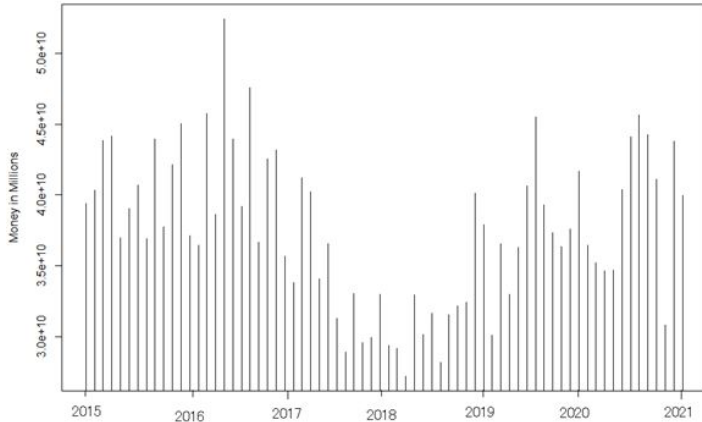


COVID-19's Impact on House Rent & Sales In Australia

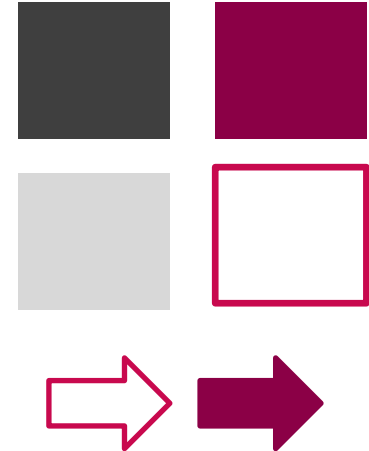


- The adjoining graph shows us trend of house rents & we can see a **sudden fall after Jan - Feb 2020**.
- The rents in general have **gone down to the rates as in 2017**.

Housing Sales Data Trend

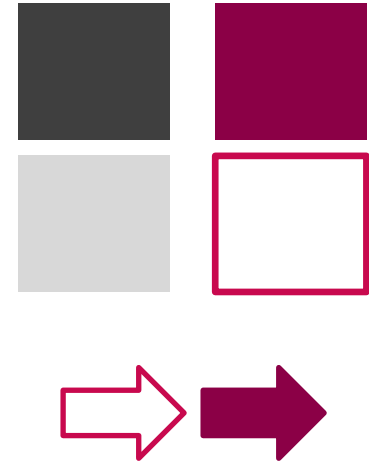
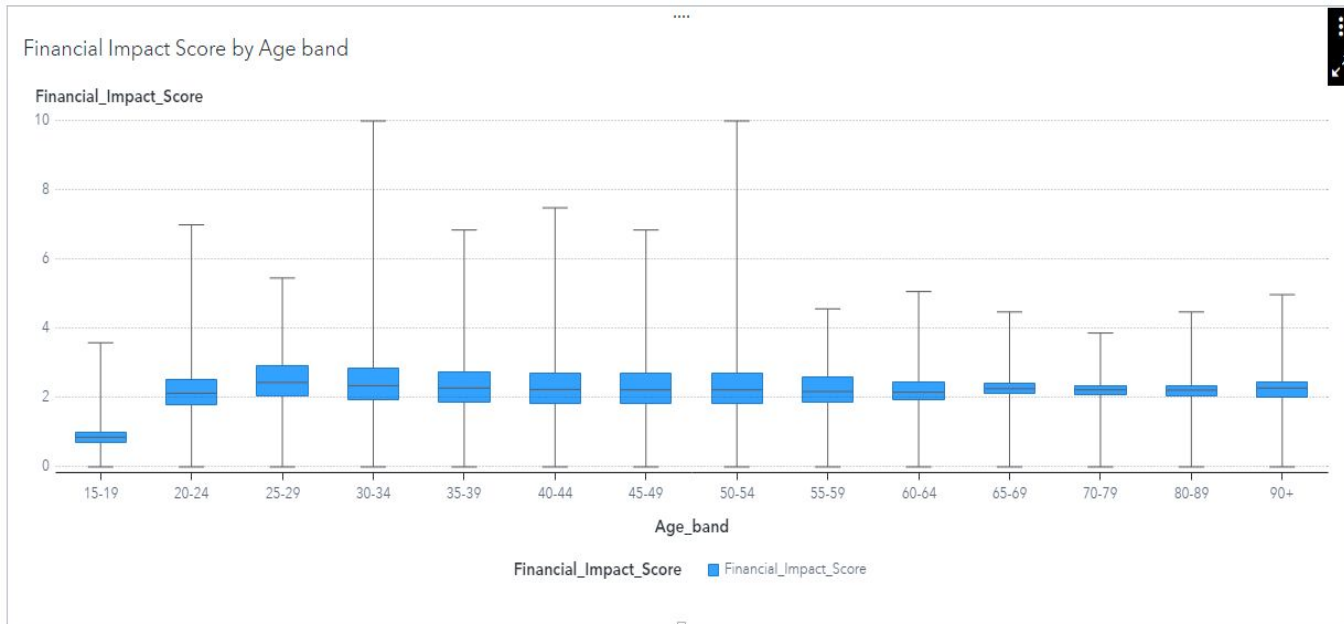


- The trend of housing sales (on the left) is **not affected by COVID19**.
- It can be because the housing prices came down and people bought more, maintaining the trends.
- **Decreased mobility** and **restrictions of international borders** had a direct impact of house rents.
- Majority of people **lost work /income** and it shows directly in rent prices.

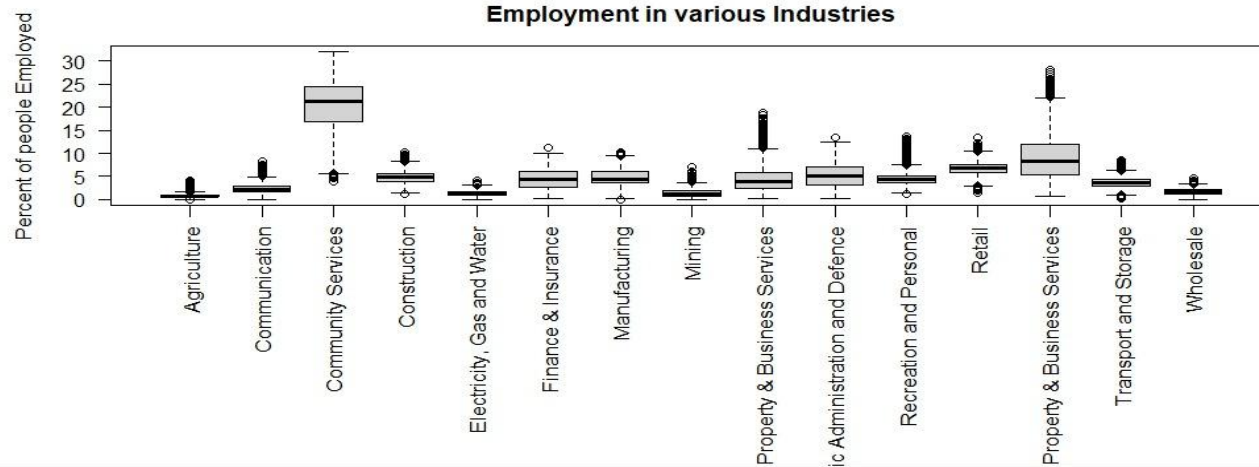


Financial Impact Score on various Age Groups of People

- Age group 20 to 59 have been impacted the most
- Age groups below 19 and above 60 have been impacted the least
- This indicates that most of the working population is affected due to the lockdowns



Impact of COVID19 on the Industrial Sector



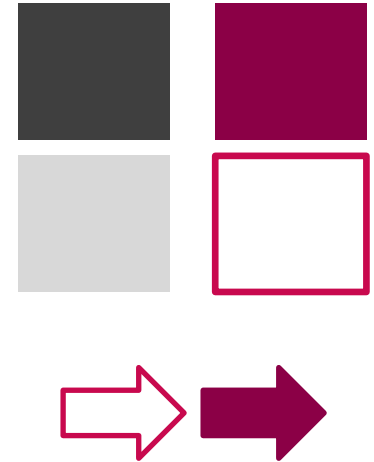
- Thus, the picture shows that there is an adverse effect on the industrial sector.
- All work has been shifted on Work From Home format and Industrial sector cannot rely on such kind of format.
- Therefore, Covid Lockdown impacted harshly on Industrial Corporations such as Mining, Agriculture, Wholesale etc and it led to Unemployment.

- The provided snapshot describes the employment status from various Industrial sectors.

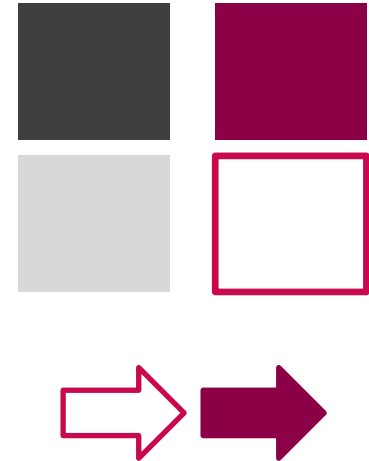
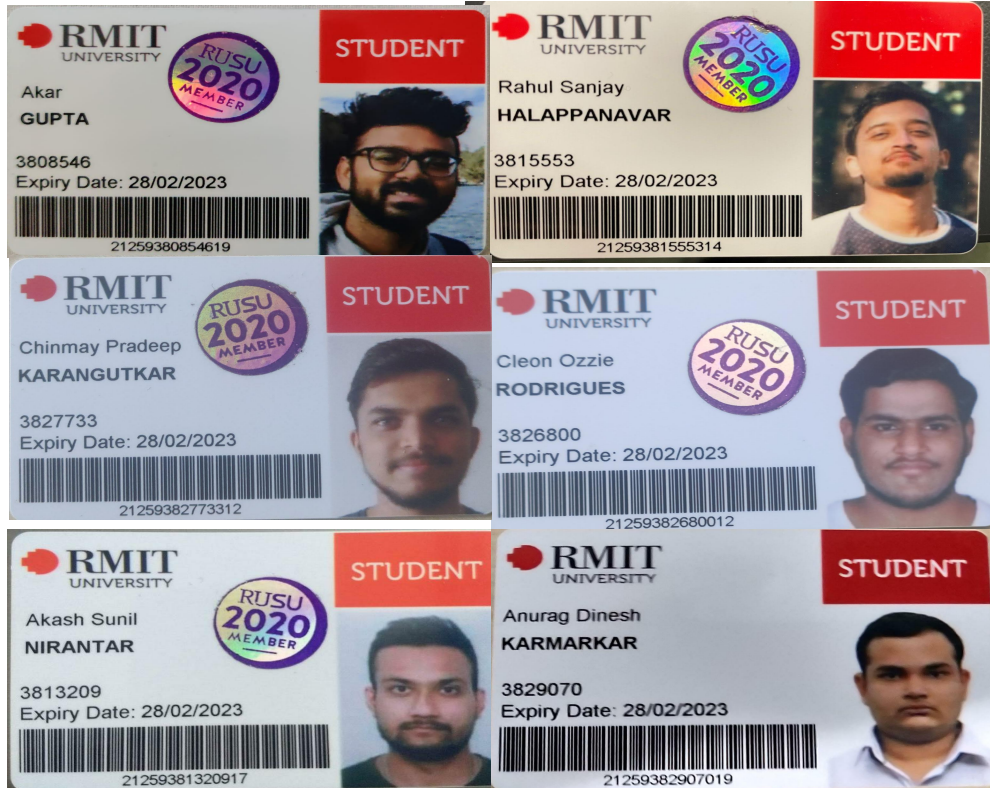


Conclusions and Solutions

- The lockdown has **affected the overall productivity** of many industries
- This directly resulted in, **decrease in the employment** in some sectors and **increase in some sectors**
- Due to the lockdown people are working from home which has resulted in **low mobility around the cities**
- We need to **classify some jobs** and employment sectors **as essential**, so they can continue to work even when any type of lockdown is deployed
- As more and more people are working from home(WFH) it is becoming a mainstream option. We need to have a **set of rules for work from home** to *increase the overall mobility which will support the local businesses and public transport*
- We also need to **increase the percentage of workforce allowed** in the offices



Student IDs of Team Members



Datasets Referred

- Google Mobility Data for Victoria Jan 2020 to Dec 2020 (Slide 3)
- Apple Mobility Data for Australia (Slide 4)
- APM dataset of rent and sales (2015-2020) (Slide 5)
- Taylor Fry COVID-19 Financial Impact Index Data (Slide 6)
- Roy Morgan Census and Survey Data (Slide 7)

