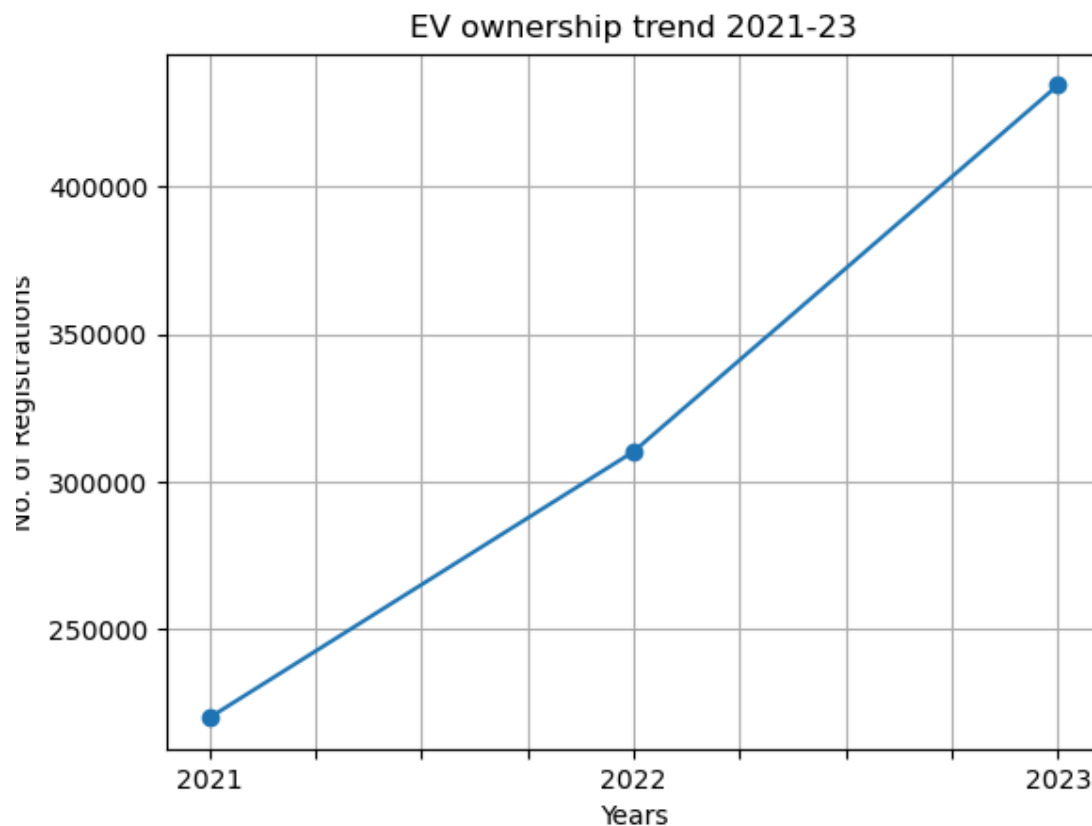


Summary

In this repository, Australian ownership data of each vehicle type is assessed against the corresponding postcode to gain an understanding of current trends of each vehicle type. It then focuses on electric vehicles, investigating the geographic impact on the number of electric vehicle registration, and what a typical person's demographic is that owns an electric vehicle.

What proportion of the Australian market is EV for the year 2023?

#Graph (EV Ownership Trends 2021-2023)

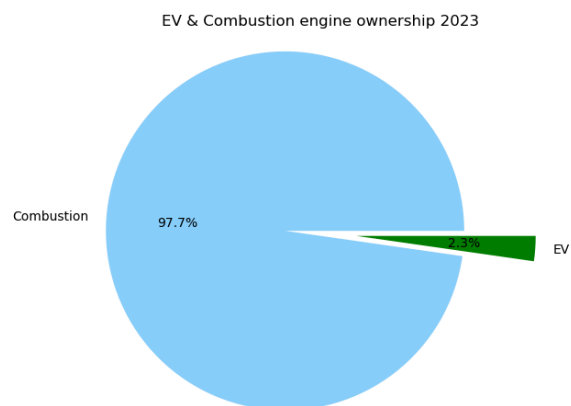
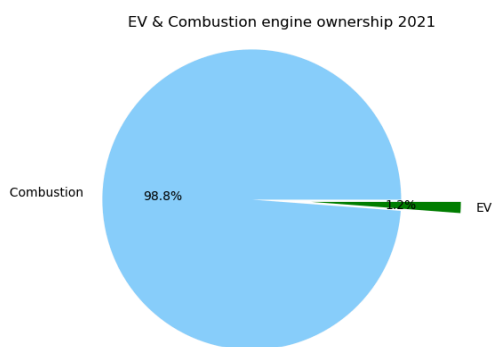
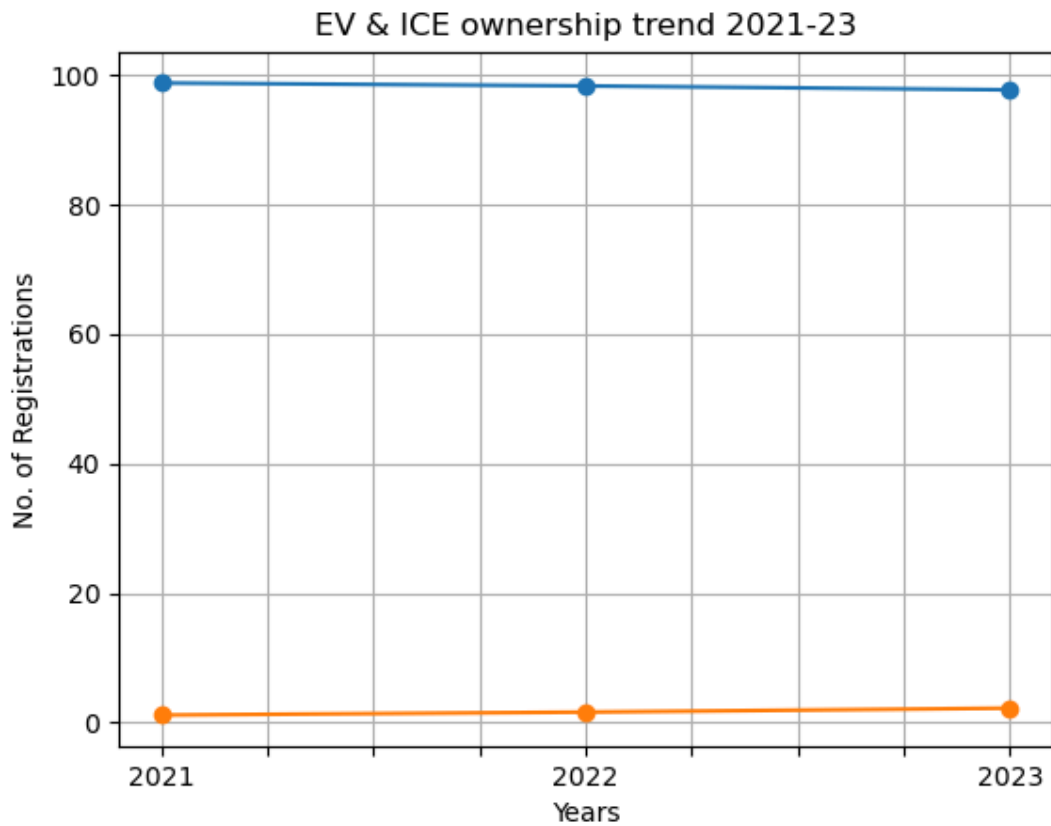


The proportion of the Australian market, in terms of vehicle ownerships, is dominated by Internal combustion engine (ICE) vehicles. Hybrid & Battery electric vehicles (BEV) make up 2% of the market. From 2021 to 2023, the number of BEV & hybrid vehicles have seen a slight rise from 1.2% to 2.3%. From 2022, the registrations have spiked for EV as compared to previous years.

As of 2023, EV vehicles make up 2.3% of the Australian market and the analysis graph shows that this is set to steadily rise in the coming years.

What is the trend for EV ownership for the 3 years up to 31 Jan 2023?
How does EV ownership trend compare to ICE ownership trend?

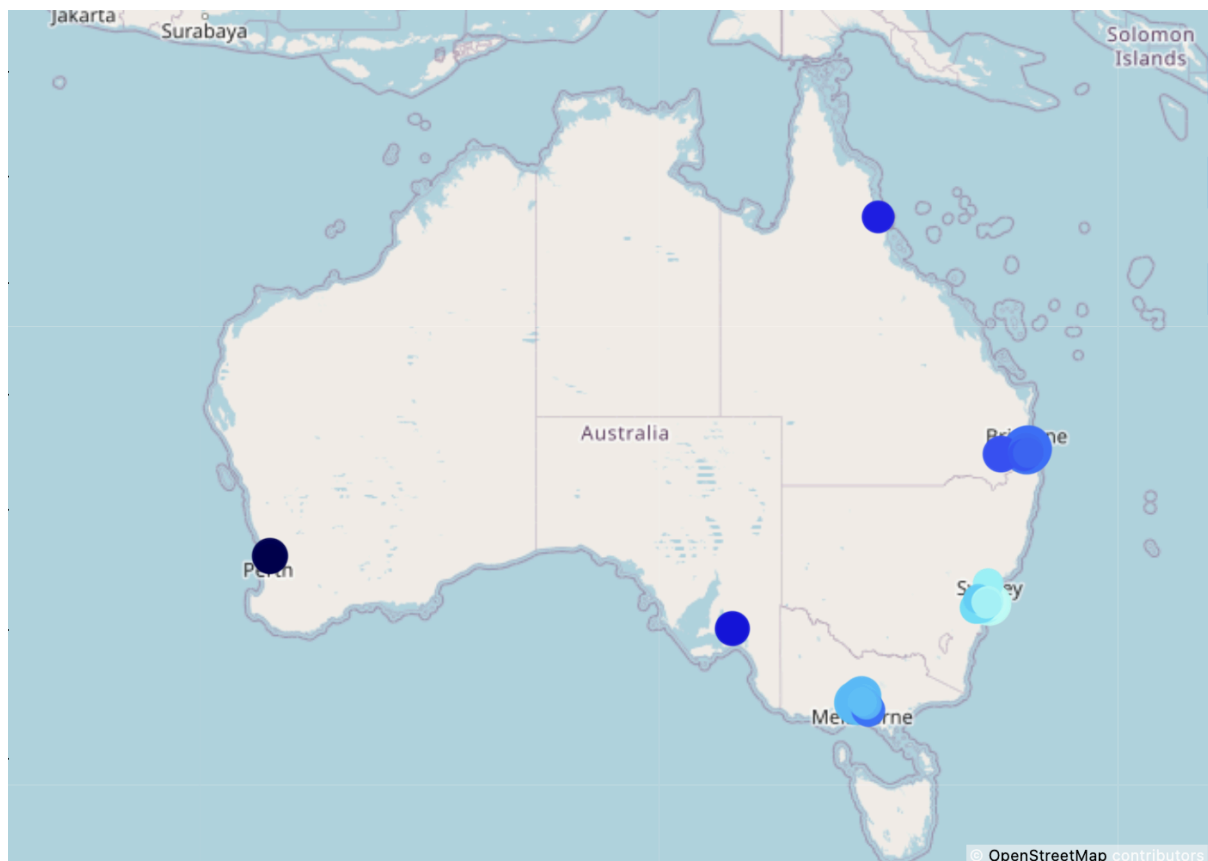
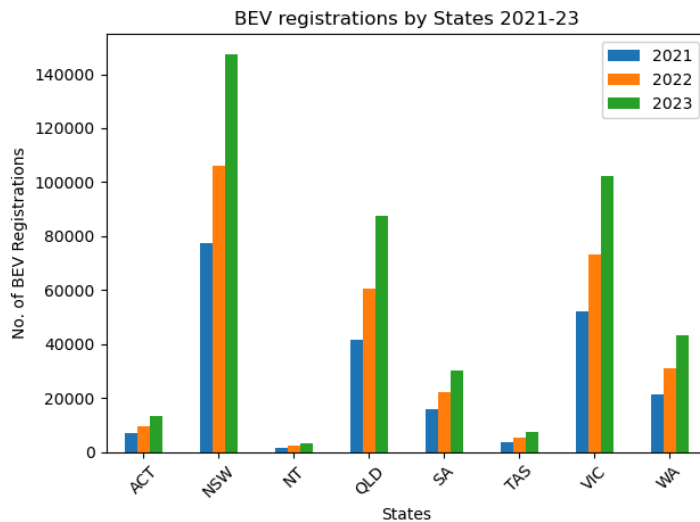
#Graph (EV and ICE ownership Trend 2021-2023 + two pie charts)



The registration trend of ICE vehicles continues to rise. However, when compared to EV vehicles, the proportion of ICE registrations have slightly dropped over 2021 to 2023. EV registrations have seen a steady increase in proportion.

What geographical location has the greatest ownership per capita?

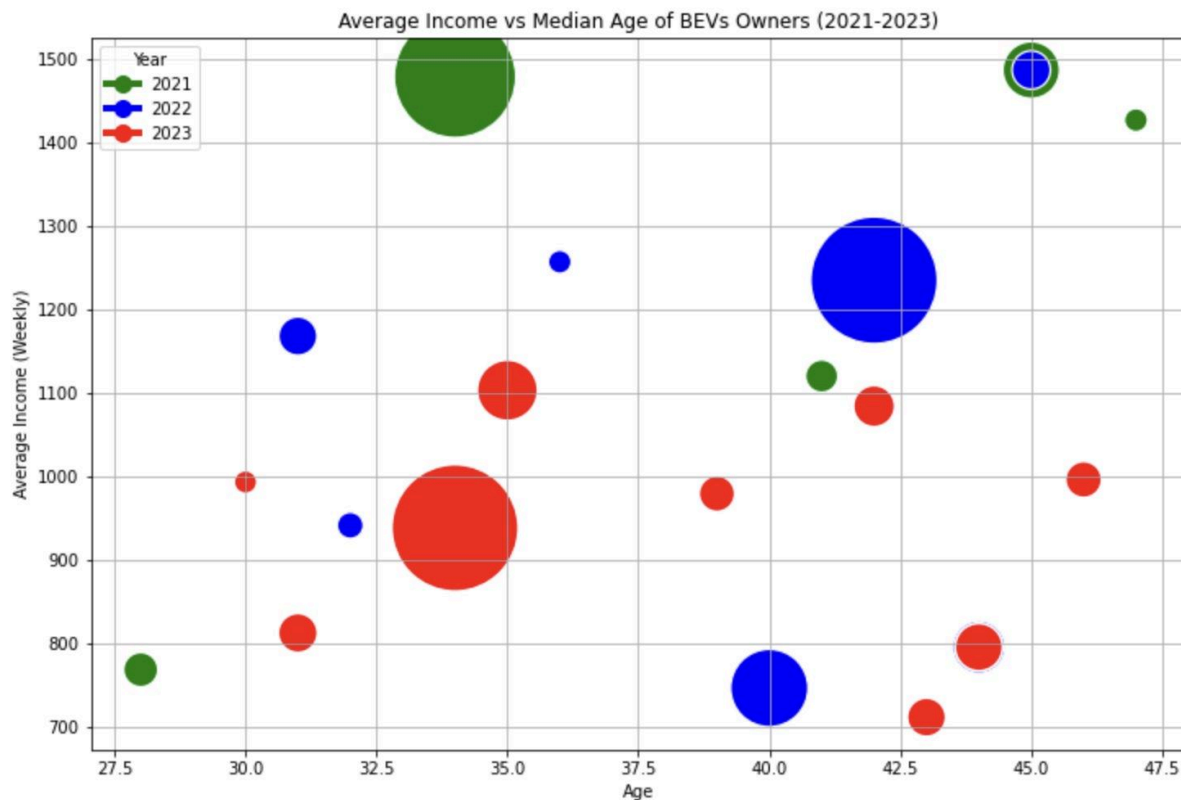
#Graph (BEV Registration by States)



EV ownerships have increased within all states from 2021-2023. The EV ownerships are shown to be higher in New South Wales, Victoria & Queensland as compared to other states. The postcodes with highest EV ownerships are based around major cities such as Sydney, Melbourne, Brisbane & Perth. This indicates the EV ownerships are higher in metropolitan areas within Australia.

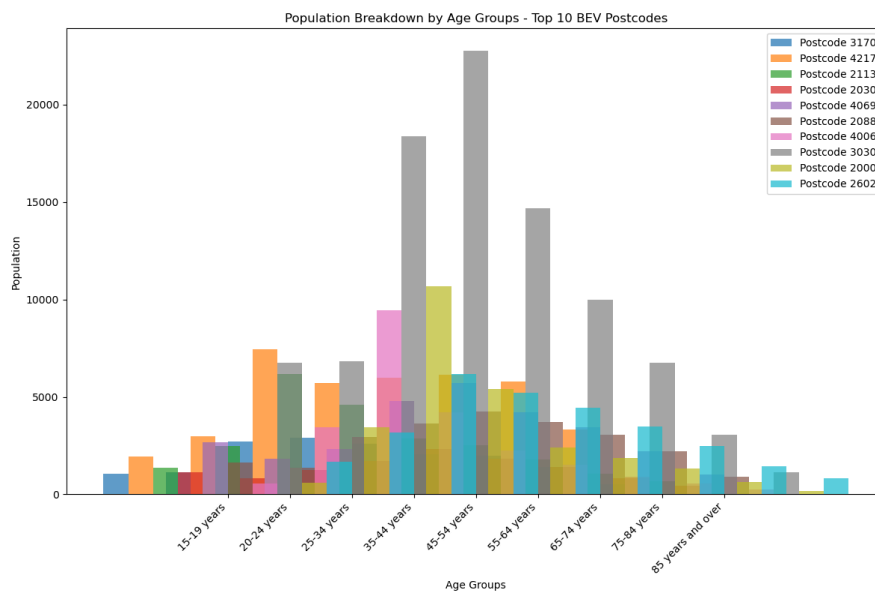
What is the demographic for those that own EV?

#Graph (Average Income vs Median Age of BEVs Owners (2021-2023), Population Breakdown by Age Group - Top 10 BEV Postcodes, Population Breakdown by Age Group - Top 10 ICE Postcodes)



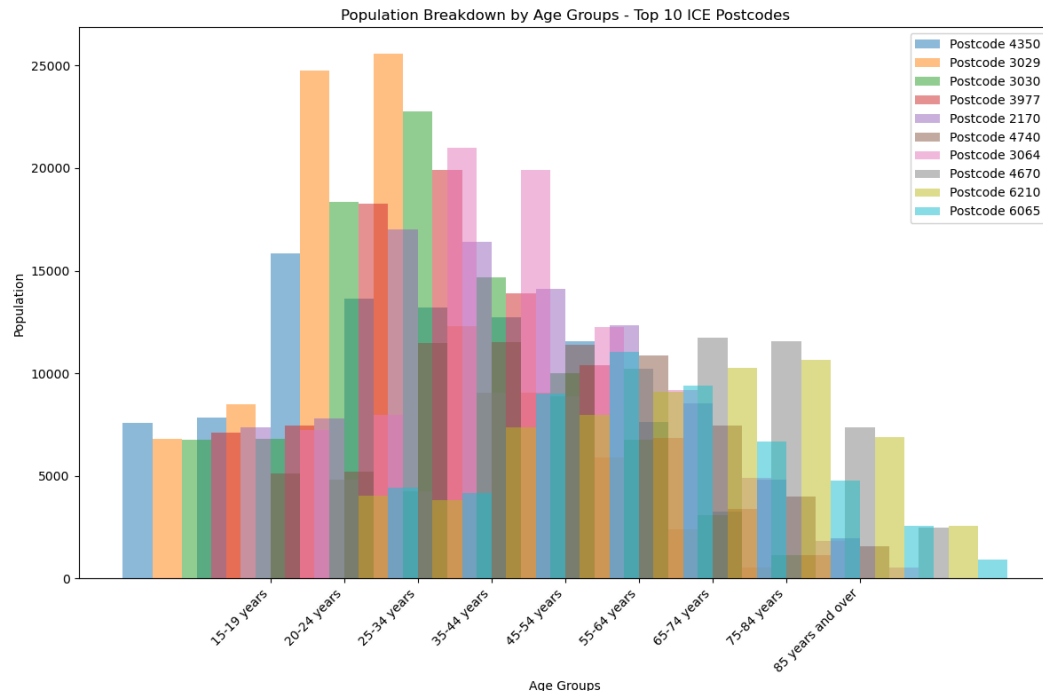
The graph 'Average Income vs Median Age of BEVs Owners (2021-2023)' primary objective is to investigate the relationship between income levels and the purchase of electric vehicles. The data reveals a noticeable trend: initially, electric vehicles were more popular in wealthier suburbs, indicating that higher-income individuals were more inclined to buy them. However, as time progresses, there's a shift in this trend, showing that the income bracket of electric vehicle buyers is gradually decreasing. This suggests that electric vehicles are becoming more accessible or appealing to people with lower income levels, indicating a broadening of the market.

#Graph Population Breakdown by Age Groups - Top 10 BEV Postcodes



Of the postcodes with the most EV ownership the age group 35-44 is the most populous, suggesting this age group is the one more likely to be driving an Electric Vehicle. Mulgrave, Victoria, postcode 3170 has a population of 20,218 with a median age of 39 (ABS Census date 2021). Mulgrave is a suburb of Greater Melbourne reinforcing the trend of higher EV ownership in Major Urban Centers.

#Graph Population Breakdown by Age Groups - Top 10 ICE Postcodes



Of the postcodes with the highest ICE ownership the age group 35-44 is the most populous. Toowoomba, Queensland, postcode 4350 has a population of 134,037 with a median age of 39. Toowoomba is a city in rural Queensland which also reinforces the trend of Higher EV ownership in Major Urban Centers.

Conclusion

In conclusion, the analysis of the Australian electric vehicle (EV) market up to January 2023 presents several key findings. Firstly, while Internal Combustion Engine (ICE) vehicles still dominate the market, EVs, including hybrids and Battery Electric Vehicles (BEVs), are carving out a steadily growing niche. Despite making up only 2.3% of the market in 2023, the rate of EV ownership has shown a consistent upward trend, indicating a shift in consumer preferences.

Geographically, EV ownership is concentrated in urban centers, with the highest per capita ownership in New South Wales, Victoria, and Queensland, particularly around major cities like Sydney, Melbourne, Brisbane, and Perth. This trend underscores the appeal of EVs in metropolitan areas, potentially due to factors like environmental consciousness, availability of charging infrastructure, and lifestyle compatibility.

Demographically, the primary consumers of EVs are evolving. Initially favored by higher-income individuals, particularly in wealthier suburbs, there's a noticeable shift towards a broader income range purchasing EVs. This trend is evident in the analysis of postcodes, where the size of the plots on the graph reflects the postcode's rank rather than the number of vehicles, illustrating the spread of EV ownership across different income levels. Additionally, the age group most associated with EV ownership is 35-44 years, indicating a demographic that is likely tech-savvy, environmentally conscious, and financially stable enough to invest in newer technologies.

Moreover, the trend of average income levels decreasing among EV owners, particularly noted in the 34-year-old demographic, suggests that EVs are becoming more accessible and appealing to a wider range of consumers. This shift could be attributed to various factors, including the lowering costs of EVs, increased awareness of environmental issues, and improvements in EV technology.

Overall, these trends reflect a dynamic and evolving landscape in the Australian vehicle market, where EVs are gradually becoming a more prominent feature. The data indicates a future where EVs are likely to become more commonplace, driven by a combination of technological advancements, changing consumer preferences, and supportive environmental policies.