

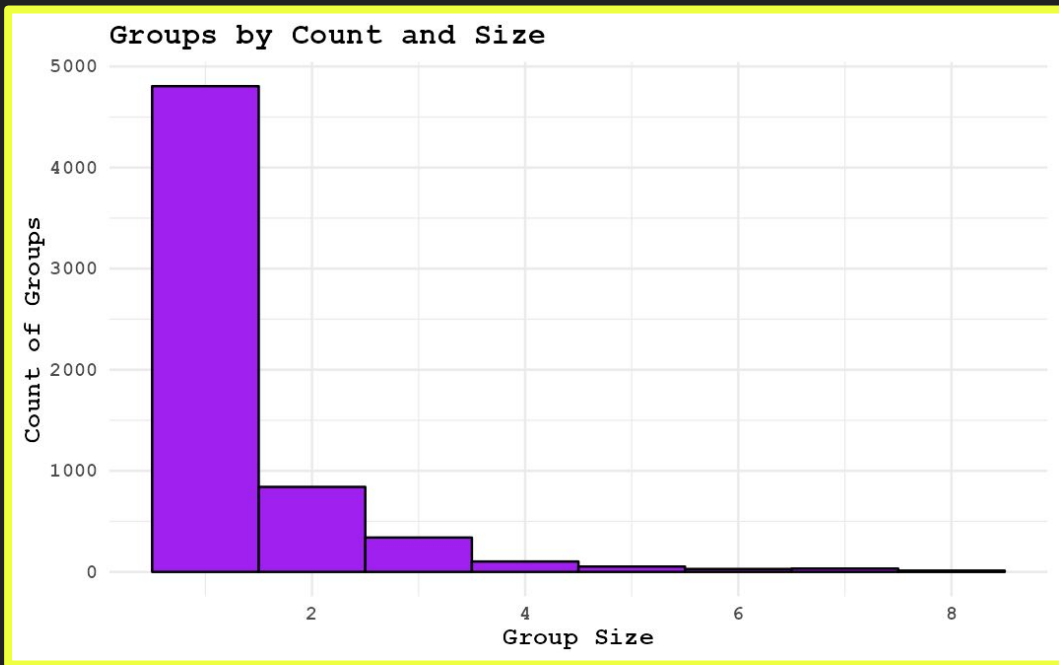
A JOURNeY TO SPaCe

Final R Project by Liz Francese

PASSENGER COUNTS

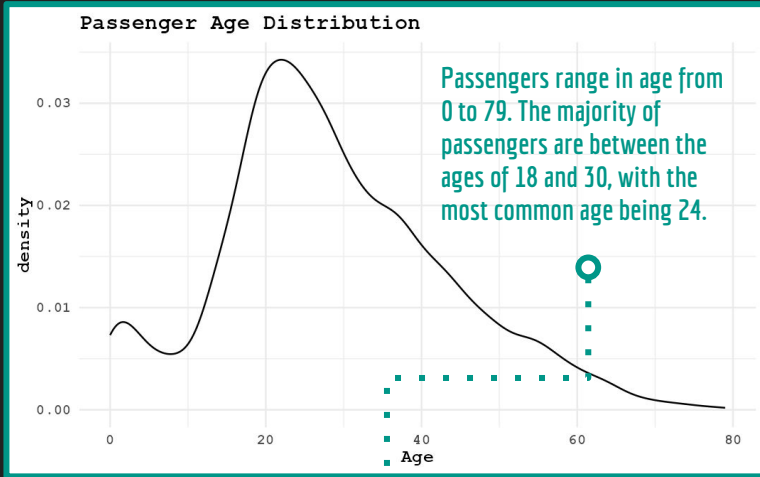
From a dataset containing the details for 8,693 travelers, we can make inferences regarding the nature of space travel by examining the characteristics and habits of the passengers themselves.

Passengers are each assigned an ID that corresponds to their travel group. Passenger 0001-01 is the first passenger of the first group. Within our dataset there are 6217 groups of passengers with an average group size of 1.398263.



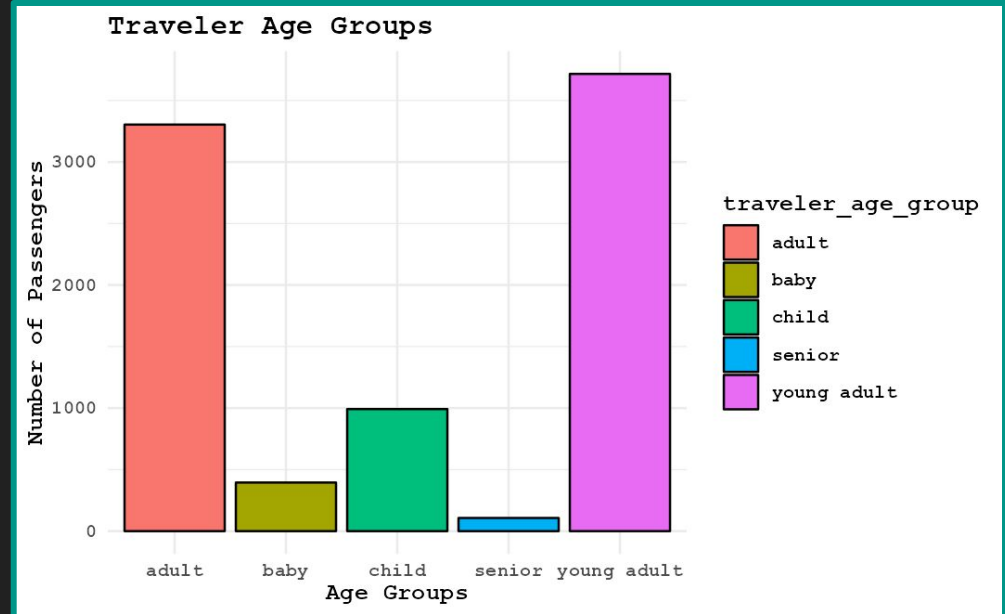
Single passenger groups are about 5x more common than two person groups

PASSENGER AGES

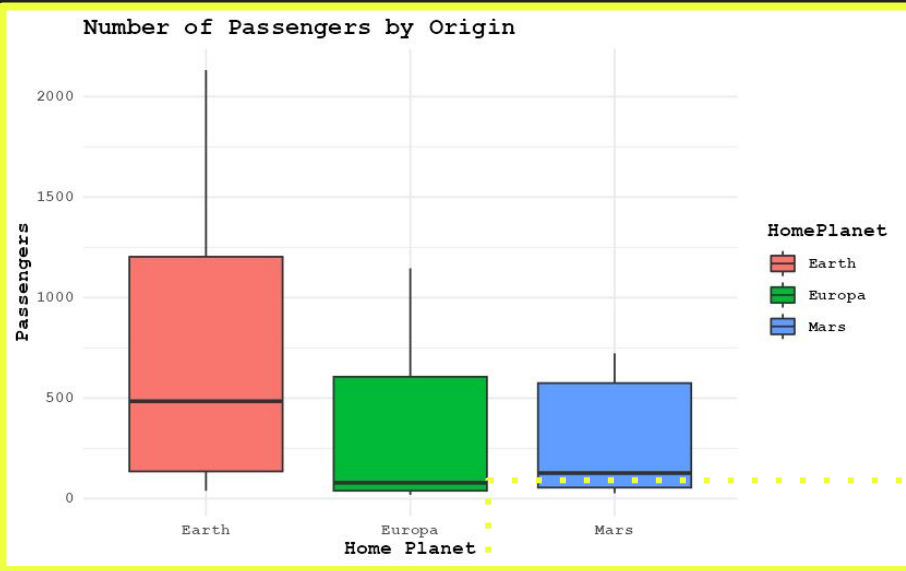


It is clear that space travel becomes less popular as beings age. This may be due to the risks of space travel, or the nature of aging. What is clear, however, is that the data indicates that young, solo travelers are by and large the most common type of ship passengers.

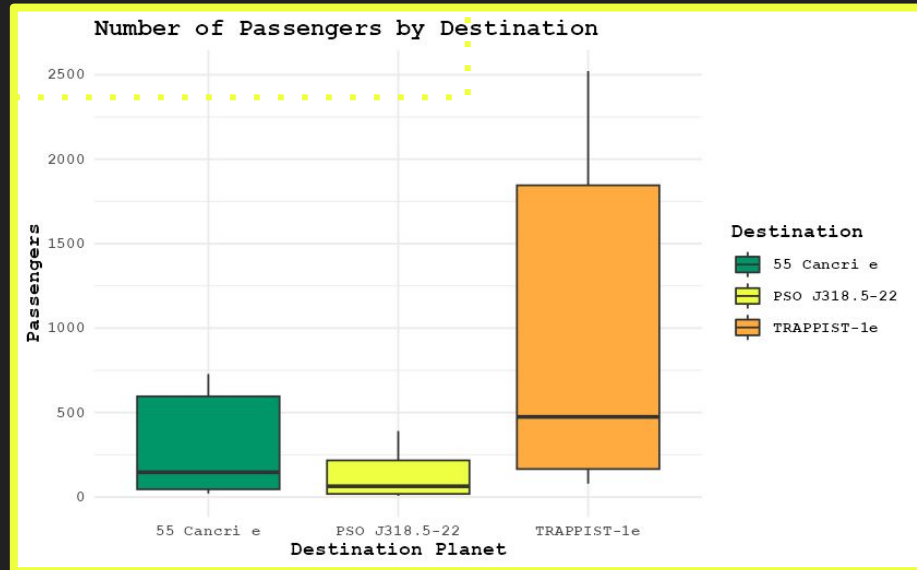
For a deeper understanding of the spaceship clientele, we'll group the 18-30 year olds together as 'Young Adults'. Below them are babies (0-4) and children (4-17), and above them are adults (31-65) and seniors (65+).



WHERE DID THEY COME FROM?



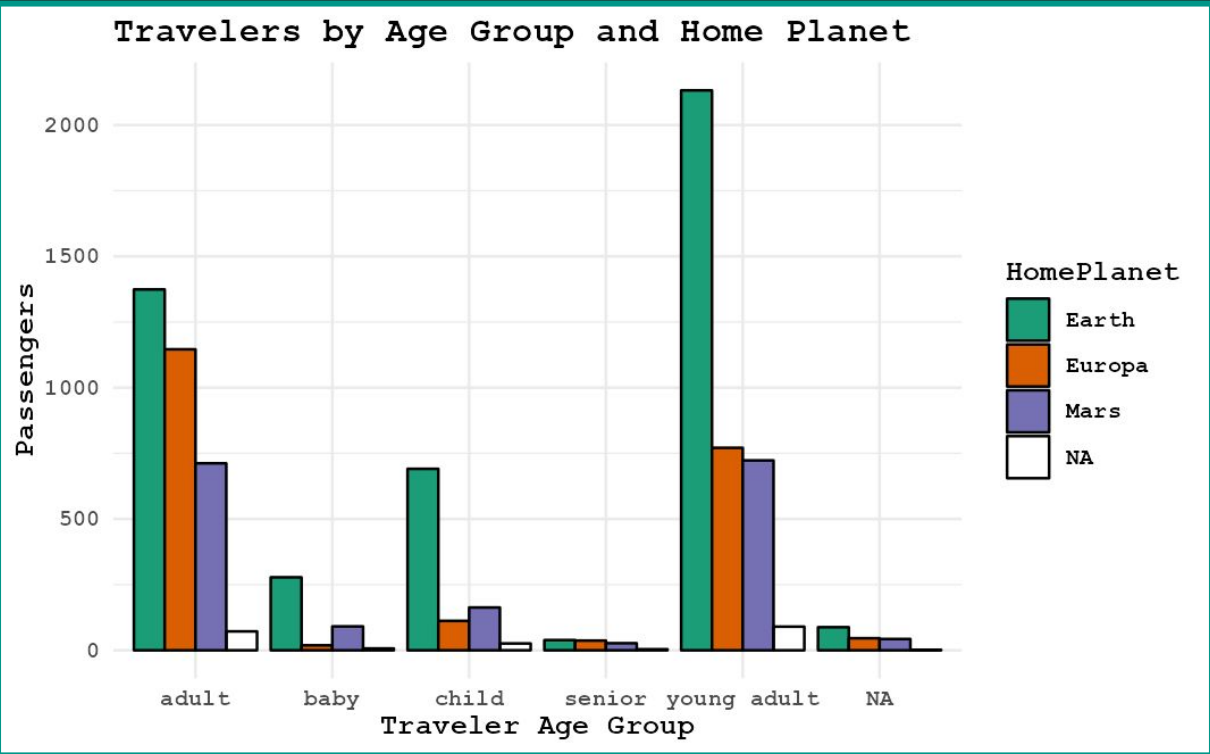
WHERE ARE THEY GOING?



HOME PLANET

In addition to being young adults, nearly half (49.7%) of travelers are Earthlings, presumably getting a late start in the space race among their European and Martian counterparts. In this way, space travel seems to have become the new gap-year/ hostel hopping/rumspringa among the population. A few young families even opting to take their children.

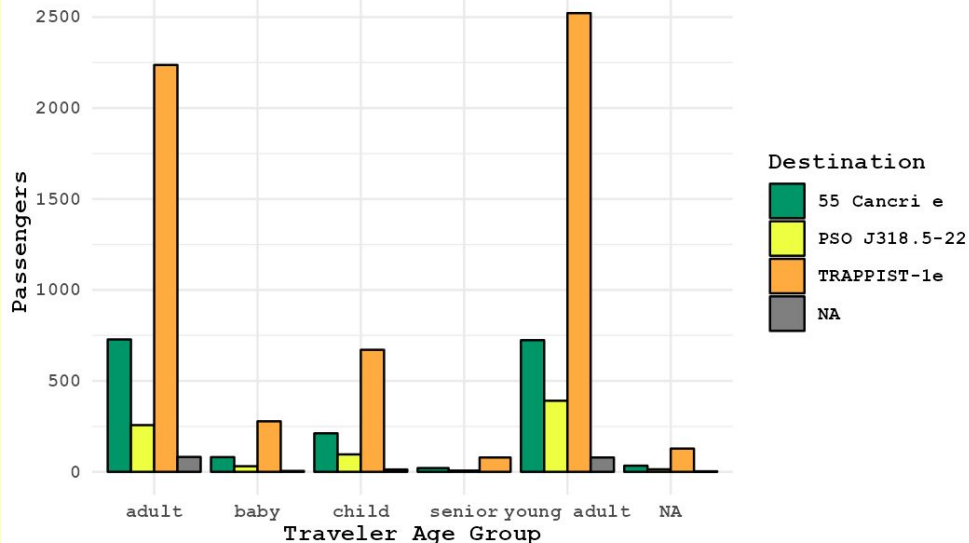
While a small number of seniors are present from each of the origin planets, their numbers are similarly low across the planetary neighbors.



Seniors account for only 1% of space travelers, proving space travel is either not safe or otherwise impractical for seniors. Meanwhile 16% of travelers are children or babies and 72% of them are Earthlings, suggesting that Earth's population growth may be declining as a result of an insecure atmosphere, the curious repulsion to socialized terrestrial supports and/or any number of common, yet preventable planetary demises.

DESTINATION PLANET

Travelers by Age Group and Destination

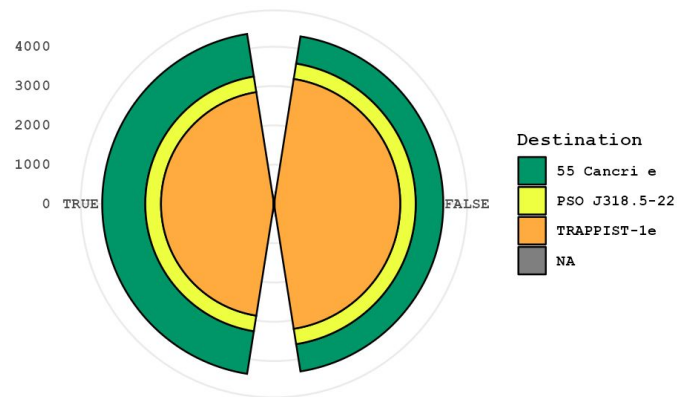


While the numbers to 55 Cancri e should also not be ignored, having over 25% of completed trips in their name, the number of uncompleted trips clearly shows a marked popularity in TRAPPIST as a destination.

So then, where are they going?

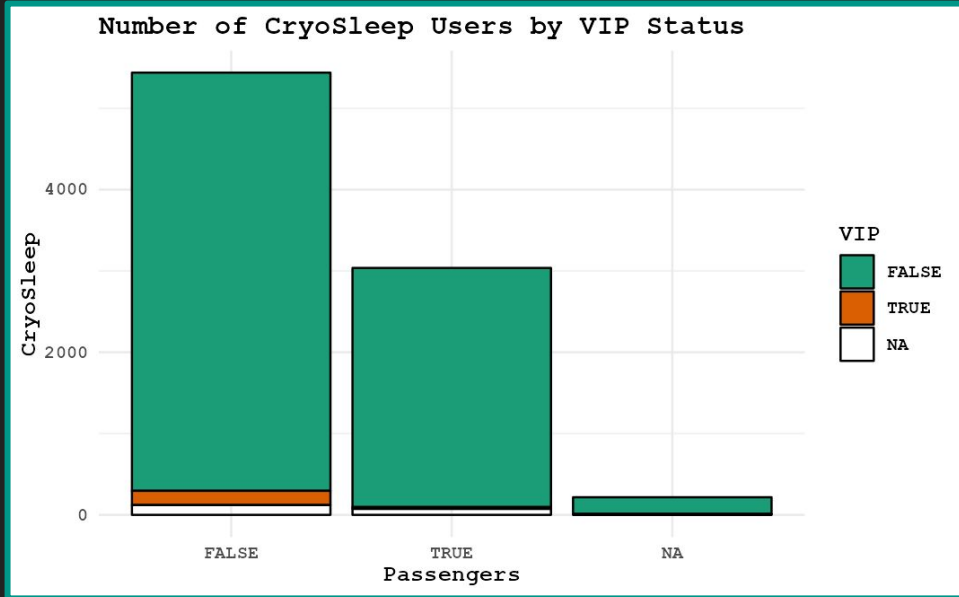
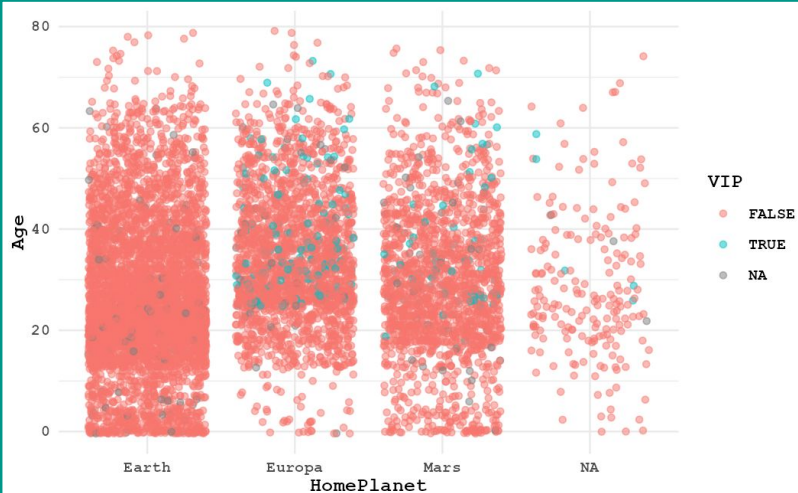
Clearly, opportunity of some sort awaits the pilgrims in TRAPPIST-1e. Though the other destinations are not in and of themselves completely lacking in new arrivals, the pull towards TRAPPIST-1e seems to be consistent, at the very least, across a number of trips, as the below chart demonstrates a steady yet increasing number of arrivals to the planet.

Number of Completed Trips by Planet



TRAVEL OPTIONS

Passengers may choose from several options to make their journey more comfortable. Those options include a VIP package and the option to go into CryoSleep. Though details for what the VIP package contains are limited, and the cost of CryoSleep is unavailable, CryoSleep seems to be unpopular among both the VIP & non-VIP populations.

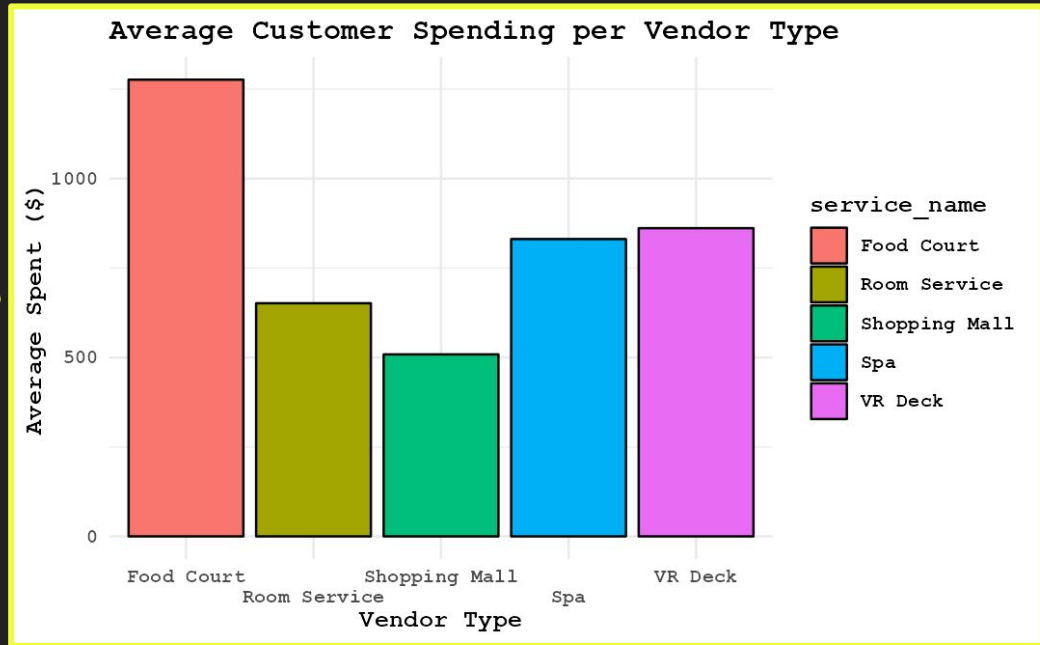
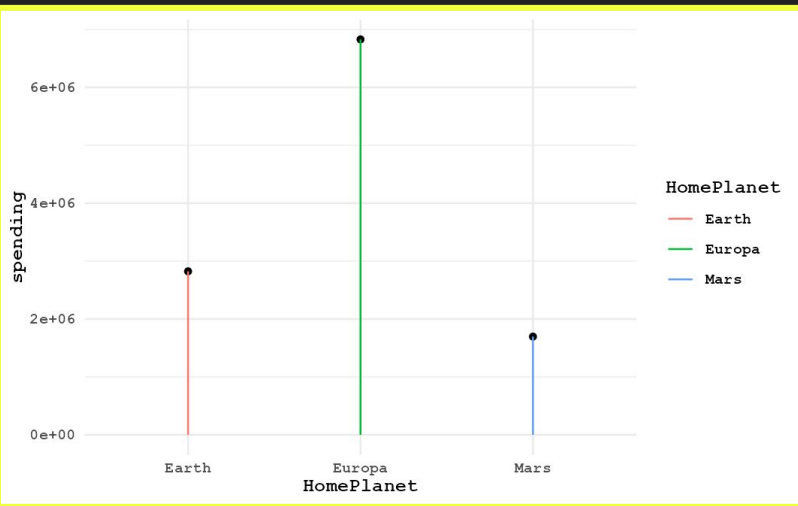


Babies are the most frequent users of CryoSleep, followed by children and adults. This could be due to the costs of CryoSleep or, more likely, because babies are more likely to cry-not-sleep otherwise. It may also be that youths are less likely to suffer damaging effects from technologically induced sleep.

If Cryosleep is unpopular, VIPs are less popular with only 2% of passengers claiming the status. In support of our theory on the deteriorating conditions of Earth, there are no known VIPs from the planet. The majority of VIPs are from Europa, followed by Mars.

THE AMENITIES

Amenities are plentiful upon the ship. Examining customer spending data, we can also assume spaceship pricing is taking advantage of the consumers' lack of choice in vendor.



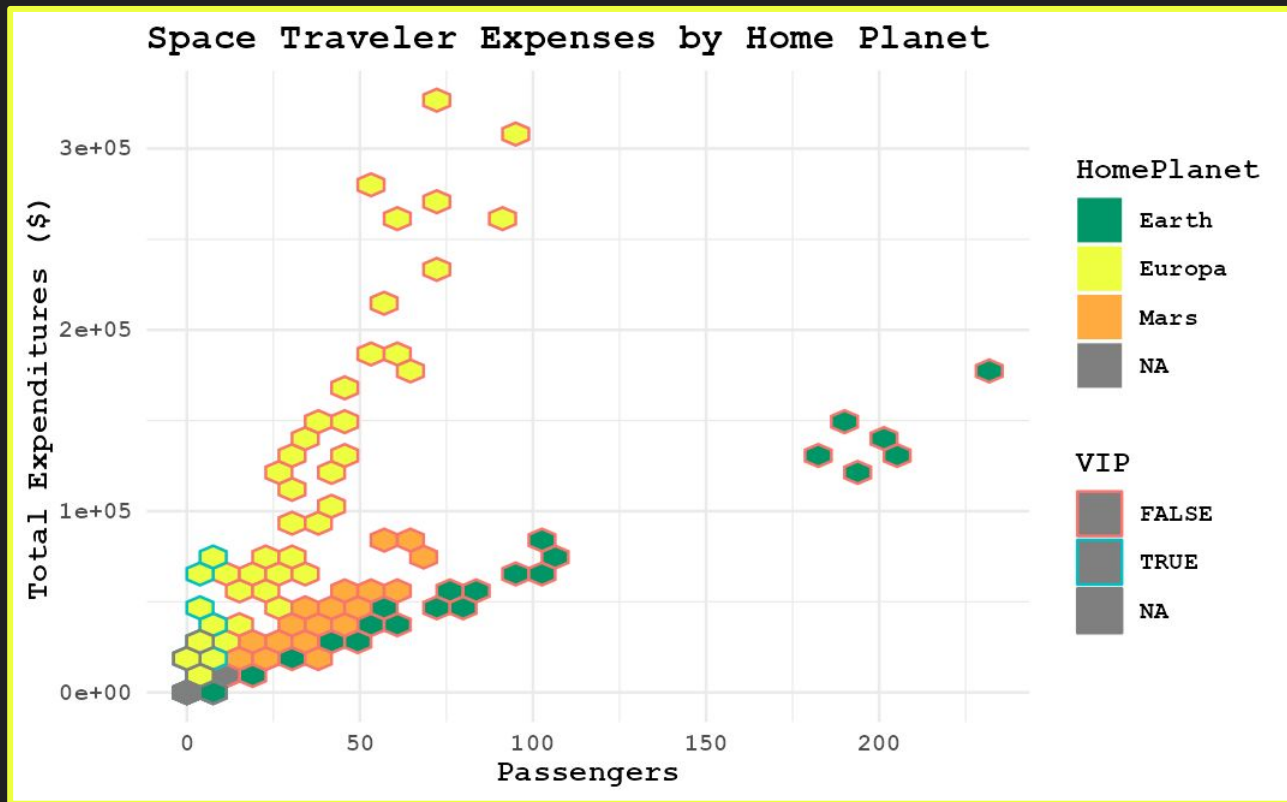
Examining spending patterns from several different angles yields expected results among age groups, home planets and VIPs.

Notably, Europa has the highest spending on ship amenities overall, and Mars is at a disturbingly high third place, considering the ratio of Martians to Earthlings.

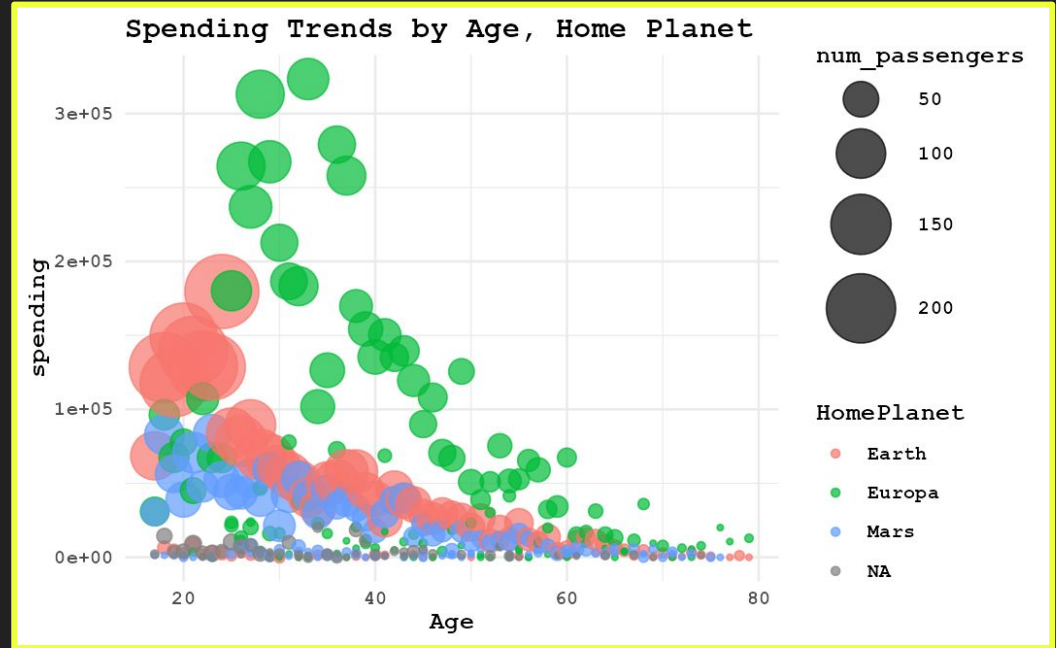
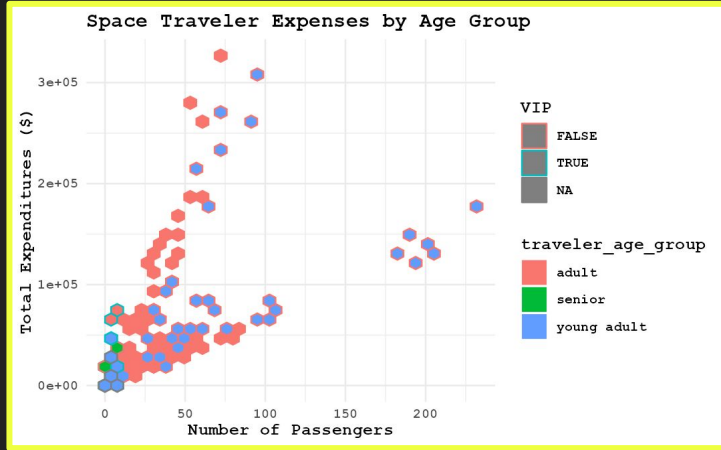
THE AMENITIES

While spending among age groups more or less follows the expected pattern, expenses among species are very different with European and Martians showing a much more denser financial than populous incident.

Unsurprisingly, the VIP population is also more densely located among the non-Earthlings.



THE AMENITIES



Further analysis yields the same results: while young adults and adults from Earth are the largest subset of the space travel population, their gross presence is not representative of their financial disposition.

IN CONCLUSION

More data is needed to draw further conclusions regarding the nature of space travel the reasons why populations move among the galaxy. Given the trajectory of Earth and the flaws in its governance, it is unsurprising, but significant, nonetheless that Earthlings are so plentiful among the passengers in quantity, yet so scarce in accessing amenities. This suggests that Earthlings are not traveling for leisure, but out of a growing necessity.

Trends indicate that travel is not popular and, therefore, likely not safe for all age groups. It also suggests that the desire to travel through space is not necessarily bred from wanderlust, but from desperation.

While TRAPPIST seems to be a destination for all beings in the galactic sector of Earth, Mars and Europa, planet may also hold new hope for the majority of travelers and be just of simple intrigue for a few.