a. If I was part of the San Francisco Planning Office (SFPO), I would create an in-person system to verify that business licenses are valid for short term rentals. This would require renters to see a government-employed clerk in person at an official office such as the Post Office, Secretary of State, Department of Motor Vehicles, etc. With this new system, renters would have to provide identification and the policy number can be correctly verified by a human, which minimizes the risk of owners incorrectly typing the number on the Airbnb website or completely making a number up. One argument against this system is that it is not easily accessible for everyone. For many renters, their Airbnb properties might be side income on top of their daily jobs. People might not have the time to get their business license verified in person as they are working instead. Furthermore, those who do not have adequate transportation to travel to an office would be unable to obtain a license completely and be excluded from the short-term rental market. Another argument against an in-person system is that it will make the process of obtaining a business license very lengthy. Especially in such a densely populated city as San Francisco, the wait times at Post offices, Secretary of State offices, and Department of Motor Vehicle Offices can be very high. Combined with possible understaffing from Covid-19 and other issues, it could take lots of time to issue business licenses, which would reduce the number of validated listings on the Airbnb platform.

b. If I was a data scientist working with a housing activist organization to fight against housing insecurity, I could use this data to look into housing affordability. The Housing Insecurity in the US Wikipedia page states that housing affordability is defined by the ratio of annual housing costs to annual income. The data already provides the cost of Airbnb listings and we can find the average income of different San Francisco neighborhoods to explore the research question "Is there mass housing insecurity in San Francisco based on housing affordability of the properties in the area?". The Wikipedia article claims that if individuals spend more than 30% or 50% of their income on housing, they are housing insecure. We can use our data to further explore this topic.

c. When discussing the legality of web scraping, it is important to consider whether or not the web scraper caused damage to the host. For instance, in our research, we were using web scraping to tackle the issue of affordable housing shortages in San Francisco. Similarly, many people use web scraping to fight for social justice and equality such as in the Sadvig v. Barr case where it was used to investigate algorithmic discrimination based on race and gender. Web scraping can also cause damage to the host site/company, though, such as the case of eBay v Bidder's Edge where Bidder's Edge was placing automatic bids and auction sniping. Therefore, web scraping can be used to both address systemic biases/issues and intentionally cheat the system and cause harm, so it is important to consider whether the process caused damage when discussing its legality.

d. One guideline to consider when accessing public data is how sensitive the information is. Even though the data is public and open access, it could be information that reveals a lot of personal information about users. For instance, it could contain data about addresses, social security numbers, credit card numbers, etc. If this data is mishandled, people can have their identity stolen and other serious threats can occur. Another guideline to keep in mind is to only

collect and share public data when needed to reduce the risk of data breaches. It is also important to consider anonymizing public data to hide identifiable information.