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Capstone Report

After completing in-depth research on Grammarly.com and viewing the research of my classmates on websites such as Dailymotion, Airbnb, Royal Bank of Scotland, Robinhood, and Swiggy, it is easy to observe patterns in web security and privacy practices. Regarding web security, most of the websites were very secure and only used HTTPS to send information. However, Dailymotion did have one request to an HTTP URL which can make the whole website less secure because attackers can see information sent over HTTP and potentially inject his/her own code into the request. Another potential security risk found on the Robinhood website was that entering the user's email into the Newsletter form did not have any 2-step authentication for the email, meaning that the form could be exploited because an attacker can type another user's email into the form. Similarly, the AirBnB website contained a form where user's inputted their name and phone number. When the request was made, this information was visible within the website's code making it a potential issue if the user's information could be taken from that form and used maliciously.

Although most of the websites were generally secure, they did contain privacy issues worth noting. Each site contained various tracking cookies and tracking pixels mostly from companies like Facebook, Google, Amazon, Quora, and Bing which tracked the user's interaction with the website in order to help with advertising. As many of their Privacy Policies state, the companies do share user information with other companies, but some of their other actions seem questionable. For example, Robinhood uses first party cookies for third party companies so that they can bypass the user preferences. Daily motion does not allow users to opt out of having their information shared unless they are under 16 years old. AirBnB collects user information such as payment info, location, account info and messages between two users. AirBnB also runs their own background checks on users. This seems necessary in order to maintain the safety of all users, but considering they obtain so much user information, it is concerning and, for the user's privacy, might be better off if AirBnB outsourced another company to do the background checks for them. Swiggy collects user data such as the pages the user clicks on, how much time the user spends on the site, the user's scroll history, and the time the user accessed the site which seems very intrusive.

In conclusion, we can gather from this sample of websites that most websites are very secure by not using mixed content and sanitizing inputs, but their privacy policies seem very invasive and sometimes shady. It is very surprising that websites are able to collect enough data on its users to build accurate representations of the user's interests, age, gender, and other personal information. These websites also have the power to sell this information to other companies if they wanted, and most users would have no idea since not many people read the Privacy Policy.