

SRC Assignment: Thinking about Data Integrity

- **Question 1:** Provide some examples of systems/industries that rely on accurate and consistent data.

The financial industry needs accurate and consistent data on stock values by the second and a hospital that takes all the patients' vitals needs a consistent set of accurate data are a few examples of industries/systems that requires accurate and consistent data.

- **Question 2:** Propose a concrete example scenario of how data integrity could get violated, which could then lead to an adverse impact on a person or organization.

If someone were to change a Google Map location by changing the name of the location or changing the location of a place with a certain name, users will be frustrated that the application is providing them with the wrong address or name of the place.

- **Question 3:** In class, we've been talking about mutable vs immutable lists. Does the need for data integrity suggest that we should always use mutable lists? Why or why not?

While mutable keys are very versatile, they aren't always necessary. Pieces of data such as foreign keys, ID numbers, etc, do not need to be changed. Furthermore, things like backups or saved data should be immutable.

- **Question 4:** Pavel surveys experts' opinions on data ownership and what it means to have agency over one's data. Identify two specific claims or statements in the article that changed how you think about your agency over data (either now or when you first encountered those ideas). What specifically changed for you? (i.e., what preconceptions did you hold, and what had you never thought about?)

Pavel mentions that over 2 billion people around the world would benefit from selling their own data to companies. I never thought of data as something that can be sold on the individual level, let alone from the very individual who is selling information about themselves. This now allows to me see my personal information and data as a commodity worth, on average, \$17 per quarter or \$68 per year. This also demonstrates how unethical the data space is. They are getting most of their data for free when it's worth money that can be changing lives! Another quote that resonated with me reads "when we're dealing with personal data, we're dealing with fundamental parts of who we are" which begs the question: How accurate are certain data about us? Just because Facebook Ads say I am "into real estate" after a few google searches about my home's value, am I really into real estate? No. What I mean to say is that I am making a qualification to Elizabeth Renieris's statement. While I agree that on a surface level (ie. name, birthday, race), data is inseparable from us; however, I may be wrong, but I don't believe that data that attempts to analyze us deeply is quite accurate. Hence, I believe that data is only inseparable from us to an extent.

- **Question 5:** If you could have asked one followup question to the panelists, what would it have been, and why?

How can people in charge of keeping data out of people's hands? How do companies handle that effectively?

I have met one of the Security heads at Google who has to keep Googlers away from seeing other people's emails, but, in doing so, the sensitive information is at his liberty and I found it to be quite an interesting moral dilemma.