Data 6, Summer 2023 **Weichert and Ferrari**

Human Contexts and Ethics of Data Solutions

Discussion 5 *Summer 2023*

This is the last discussion for Data 6 Summer 2023 :,(

To wrap up, we will try to tie together all of the topics from past Data 6 discussions under the umbrella of *Human Contexts and Ethics*. Human Contexts and Ethics (HCE) is a fundamental part of data science, and a way of learning about data that we hope to weave into the fabric of the Data 6 curriculum. We hope that the Data 6 discussions serve as a starting point to spark your interest in learning more about the social contexts and implications of working with data.

1 Interpreting Data in Context

1. To begin, reflect on the guest lecture on Human Contexts and Ethics from Professor Edmundson. What did you learn or find interesting while looking at the Bay Area Air Quality Management District website? What did you take away from exploring the website, asking questions, and learning about Human Contexts and Ethics from Professor Edmundson?

   Solution: Answers will vary. It is useful to consider your own personal relationship to the BAAQMD data — if you've grown up in the Bay Area (especially in areas with oil refineries) that may influence how you perceive and interact with this data.

2. Do you have any lingering questions about the data? Is there any additional information you feel you need to better understand the data?

   Solution: Data by itself can only go so far. Oftentimes additional information or domain-specific knowledge is needed to dissect and interpret the data. Who has access to this knowledge is another important part of the data's social context to consider.

3. What do you think Prof. Edmundson meant when he said "all data is made"?

Solution: As Prof. Edmundson noted, there is no such thing a 'raw' data. All data is a product of human intervention in the world. The acts of collecting, recording, and presenting data and influenced by human decisions and motives. What should be measured? How should it be measured? Who gets to do the measuring? These are all questions whose answers impact the data collection process. In short, "Data is made by people to do work in the world in contexts that shape what they do".

4. Why is it important to question "what's not in the data" you're working with?

Solution: It is just as important to inspect what is not included in the data as what is. The absence of certain data or perspectives may shed light on the power and socio-political dynamics involved in creating the data (in other words, "Data has (and gives) authority"). Examining what is left out of the data also helps to build a more complete picture of the world, and reveal potential motives behind those responsible for creating and presenting the data.

2 What Does HCE Mean to You?

5. After yesterday's lecture and everything we have seen in Data 6 so far, how would you define "Human Contexts and Ethics"?

Solution: There is perhaps no complete definition of what HCE is. Fundamentally, it involves investigating how data shape and are shaped by (our) societies. In interrogating our data questions like "who created this data?", "what motives did they have to collecting or presenting the data like this?", and "who benefits from this data? who doesn't?" are all critical to pose.

6. Is learning about HCE important to you? Why or why not?

Solution: This is a very personal question. Different people place different emphases on concepts like privacy, accessibility, political power, the spread of information, and more. Personal values mediate our interactions with data and the world.

7. Give an example of when you've considered the ethical implications of your work as a data scientist, or how you have been impacted the social implications of data or technology. What did you take away from that experience?

Solution: Examples include targeting political ads, job application screening, predicting fire risk, determining police deployment, and facial recognition.