## **Udacity A/B Testing**

## Lesson-2 Policy and Ethics for Experiments

* 4 principles

1. Risk
   1. Is the risk greater than minimal risk?
   2. The main threshold is whether the risk exceeds that of “minimal risk”. Minimal risk is defined as the probability and magnitude of harm that a participant would encounter in normal daily life. The harm considered encompasses physical, psychological, and emotional, social, and economic concerns. If the risk exceeds minimal risk, then informed consent is required. We’ll discuss informed consent further below.
2. Benefits
   1. Are the results from the study helpful?
3. Alternatives
   1. What other choices do participants have?
4. Data Sensitivity
   1. What data is collected and what is the expectation of privacy and confidentiality?
   2. So, if we go back to the data being gathered, collected, stored, and used in the experiment, the questions are:
      1. How sensitive is the data?
      2. What is the re-identification risk of individuals from the data?
   3. We need to distinguish between anonymous data and anonymized data.

Summary of Principles

Summary: it is a grey area as to whether many of these Internet studies should be subject to IRB review or not and whether informed consent is required. Neither has been common to date.

Most studies, due to the nature of the online service, are likely minimal risk, and the bigger question is about data collection with regards to identifiability, privacy, and confidentiality / security. That said, arguably, a neutral third party outside of the company should be making these calls rather than someone with a vested interest in the outcome. One growing risk in online studies is that of bias and the potential for discrimination, such as differential pricing and whether that is discriminatory to a particular population for example. Discussing those types of biases is beyond the scope of this course.

Our recommendation is that there should be internal reviews of all proposed studies by experts regarding the questions:

Are participants facing more than minimal risk?

Do participants understand what data is being gathered?

Is that data identifiable?

How is the data handled?

And if enough flags are raised, that an external review happen.

**Internal process recommendations**

Finally, regarding internal process of data handling, we recommend that:

1. Every employee who might be involved in A/B test be educated about the ethics and the protection of the participants. Clearly there are other areas of ethics beyond what we’ve covered that discuss integrity, competence, and responsibility, but those generally are broader than protecting participants of A/B tests (cite ACM code of ethics).
2. All data, identified or not, be stored securely, with access limited to those who need it to complete their job. Access should be time limited. There should be clear policies of what data usages are acceptable and not acceptable. Moreover, all usage of the data should be logged and audited regularly for violations.
3. You create a clear escalation path for how to handle cases where there is even possibly more than minimal risk or data sensitivity issues.