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Engineering 30: Ethics

Professor Gencoglu

Reflective Writing 2

Linking Public Data Sets

In this section, we discuss the outcomes and how ethical it is for Quinn, apart of a medical research team, to be dealing with bugs in his tool. Quinn is utilizing this specific tool to find a link between genetic factors in psychological disorders. In order for it to be effective, data on subjects are needed, but the tool generates key identifiers linking to each set of data.

The problem arises when Quinn discovered that these data sets, were being linked to the same individual. He is afraid that there may be other types of bugs in the system, so Quinn wanted to release the source code for others to help and possibly identify. However, whenever something gets released into the public, there is that chance the key to finding out who each of these individuals are will be discovered and all these subjects of the experiment will have their medical record released without their permission. This is a case of liability, where if those researchers were to release the code, they are liable for the safety of those patient's data they have. In order to avoid this case, they should keep it internal, and instead, source it to a software developer or a team of developers who know what they are trying to fix and have signed NDAs. This will ensure that the code stays safe and that there is not a breach in data. They could also try contacting any developers of the tool to troubleshoot, however they would need to be explicit that they are only looking for assistance with covering the holes in the data.

If the researchers don't take these precautions, they are basically assigning blame-responsibility onto themselves and can open up law suits. When they are trusted with this data, they promised that they would do everything they can to keep the data safe. So in addition to being liable, they will be immediately the first people to blame in this incident.

Being able to think up of solutions to this problem is a core value of being an engineer, and going the extra mile, or good works, is something that every single engineer should know of. This means protecting that data, not just from breaches, but from others who may want to do harm to it. Being able to verify the good will of those who want to work on this project to debug the problem with the tool will be one way of actually ensuring that no data is leaked.