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Modern Software Concepts in Python

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Module 3 Written Assignment

After carrying out this assignment, some of the inherent limitations of carrying out

analytics over anonymously submitted data forms is data accuracy and data validity.

Without knowing the identity of the respondents, it is difficult to verify the accuracy and

credibility of their submissions. As a result, this can lead to inaccurate or fabricated data,

undermining the reliability of the results of the forms. I saw a few university names that

were not actually university names. For example, Microsoft, which was not a university,

was listed. Additionally, many entries were left blank which is not great for sampling data.

Lack of thoughtful and precise answers lowers the data accuracy of these submitted

forms.

One reason statistics can vary between generally accepted statistics versus

statistics taken from a sample, like the example provided regarding the average GRE

quantitative reasoning score in 2022-2023 being 157 and was 165 for graduate school

entries submitted, is voluntary response bias. Voluntary response bias occurs when

people choose to participate in a survey, rather than being randomly sampled. The

respondents of the survey may have strong opinions, which is what makes them want to

report their results, leaving out a population of people who do not want their results posted

and who are also important in sampling correctly. This can detrimentally skew the results

as this does not represent a random sampling.