



IIT Madras

ONLINE DEGREE

Statistics for Data Science – 1
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Week 6 - Tutorial 4

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30,000 students joins the IITM online degree course for data science. IITM online degree send a feedback form to 1000 randomly selected students. Mary and Asad has joined this course. What is the probability that Mary got the feedback form and Asad did not get a feedback form?

$$\begin{array}{c} \text{Mary} \\ \frac{1000}{30000} \end{array} \times \begin{array}{c} \text{Asad} \\ \frac{29000}{30000} \end{array} = \frac{29}{900}$$

In this question we have 30000 students who have joined the IITM online degree course in Data Science and the degree program sent a feedback form to 1000 randomly selected students. Now, Mary and Asad have joined this program. What is the probability that Mary got the feedback form and Asad did not?

So, here we have the two students Mary and Asad. Probability that Mary got the feedback form would be if she is in the 1000, so that would be $\frac{1000}{30000}$ and the probability that Asad did not get the feedback form would be the remaining, he Asad should be in the remaining $\frac{29000}{30000}$. And for both of these to happen together we multiply the probabilities. So, these two cancel off, these two cancel off, so we get $\frac{29}{900}$, this is the probability.