

Assignment 1

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Download all python codes from

https://github.com/vaibhavchhabra25/AI1103-course/blob/main/Assignment-1/Codes/simulation_code.py

and latex codes from

<https://github.com/vaibhavchhabra25/AI1103-course/blob/main/Assignment-1/main.tex>

1 PROBLEM

(Misc 6.24) Compute $P(A|B)$, if $P(B) = 0.5$ and $P(A \cap B) = 0.32$

2 SOLUTION

For two events A and B , by definition,

$$\Pr(A|B) = \frac{\Pr(AB)}{\Pr(B)} \quad (2.0.1)$$

Given $\Pr(B) = 0.5$ and $\Pr(AB) = 0.32$,

$$\Pr(A|B) = \frac{0.32}{0.5} \quad (2.0.2)$$

Thus,

$$\Pr(A|B) = 0.64 \quad (2.0.3)$$