

# Assignment 1

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Download all python codes from

<https://github.com/Dhatri-nanda/Assgn1/blob/main/AI1103-Probability-and-random-variables/codes.py>

and latex-tikz codes from

<https://github.com/Dhatri-nanda/Assgn1/blob/main/AI1103-Probability-and-random-variables/assignment1.tex>

## 1 PROBLEM

If  $P(E) = 0.05$ . What is the probability of 'not E'?

## 2 SOLUTION

Given probability of event E

$$P(E) = 0.05 \quad (2.0.1)$$

Then the probability of 'not E'

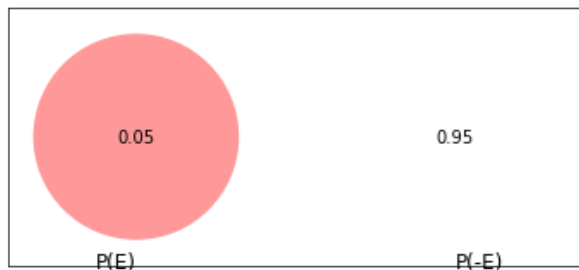
$$= P(E') \quad (2.0.2)$$

$$= 1 - P(E) \quad (2.0.3)$$

By substituting (2.0.1) in (2.0.3)

The probability of not E =  $1 - 0.05 = 0.95$

In the below venn diagram, the coloured region represents the probability of event E, while the white region represents the probability of 'not E'.



Venn diagram