

Mid Term Examination

KDD CS 513-A

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subject - Knowledge discovery and data mining

Qus-8.

A. Estimate the number of cases

- USA: Population: 331 Million , Cases per Million: 381.24

Total Number of Cases in USA = Population * Cases per Million

$$= 331 * 381.24$$

$$= 1,26,190.44$$

- Italy: Population: 60 Million , Cases per Million: 1463.97

Total Number of Cases in Italy = Population * Cases per Million

$$= 60 * 1463.97$$

$$= 87,838.22$$

- Spain: Population: 47 Million , Cases per Million: 1590.24

Total Number of Cases in Italy = Population * Cases per Million

$$= 47 * 1590.24$$

$$= 74,741.28$$

B. Given the person is living in USA what is the probability, what is the probability that the person is infected with COVID19.

$$\begin{aligned} P(\text{Infected} / \text{Living} = \text{USA}) &= 1,26,190.44 / 331 \text{ Million} \\ &= 0.00038 \end{aligned}$$

C. Given the person is diagnosed with the COVID19, what is the probability that the person lives in the US.

$$\begin{aligned} P(\text{USA} / \text{Infected} = Y) &= 1,26,190.44 / (1,26,190.44 + 87,838.2 + 74,741.28) \\ &= 0.43699 \end{aligned}$$