

PROBLEM

1. Determine the misleading strong association of the form $A \Rightarrow B$ from the data with respect to computer games and video.

2x2 Contingency table :-

	Games	<u>Games</u>	Σ row
<u>video</u>	4000	3500	7500
video	2000	500	2500
Σ Col	6000	4000	10000

Contingency table :-

* Contingency table consists of frequency of occurrence.

$$A \Rightarrow B$$

$$(\text{Game} \Rightarrow \text{Video})$$

$$\text{Lift } (A \Rightarrow B)$$

$$\text{Lift } (\text{Game} \Rightarrow \text{Video}) = \frac{P(\text{Games} \cup \text{Video})}{P(\text{Games}) \cdot P(\text{Video})}$$

$$= \frac{4000}{10000} = \frac{0.4}{0.6 \times 0.75}$$

$$\frac{6000}{10000} \times \frac{7500}{10000}$$

$$= 0.888.$$

The lift value is less than 1. Hence there is a negative correlation between the

occurrence of a games and video, such negative correlation cannot be identified by support confidence framework.