

1/24/2025

A, B

INDEPENDENT

$$P(A=T) = 0.8$$

$$P(B=T) = 0.3$$

$P(C=T | A, B)$

|   |   | A   |     |
|---|---|-----|-----|
|   |   | F   | T   |
| B | F | 0.1 | 0.2 |
|   | T | 0.4 | 0.7 |

$$P(A=a, B=b)$$

|   |   | A    |      |
|---|---|------|------|
|   |   | F    | T    |
| B | F | 0.14 | 0.56 |
|   | T | 0.06 | 0.24 |
|   |   | 0.2  | 0.8  |

0.7  
0.3

$$P(A=a, B=b, C=T)$$

|   |   | A     |       |
|---|---|-------|-------|
|   |   | F     | T     |
| B | F | 0.014 | 0.112 |
|   | T | 0.024 | 0.168 |

$$P(A=T | C=T) = \frac{P(A=T, C=T)}{P(C=T)}$$

$$= \frac{0.112 + 0.168}{0.014 + 0.024 + 0.112 + 0.168}$$