6. Bayesian Networks

3-21 in class assignment

#1 → given the light is off, find probability there's a car in the blind spot

$$P(B=1 \mid L=0) = \frac{P(L=0 \mid B=1)P(B=1)}{P(L=0 \mid B=1)P(B=1) + P(L=0 \mid B=0)P(B=0)}$$

$$= \frac{(0.1)(0.2)}{(0.1)(0.2) + (0.99)(1-0.02)}$$

$$= 0.00205$$

#2 → $P(e_1) = 0.5$

→ $P(t_1 \mid e_0) = 0.6$

#3 → $P(t_1) = 0.01$

→ higher / higher / lower