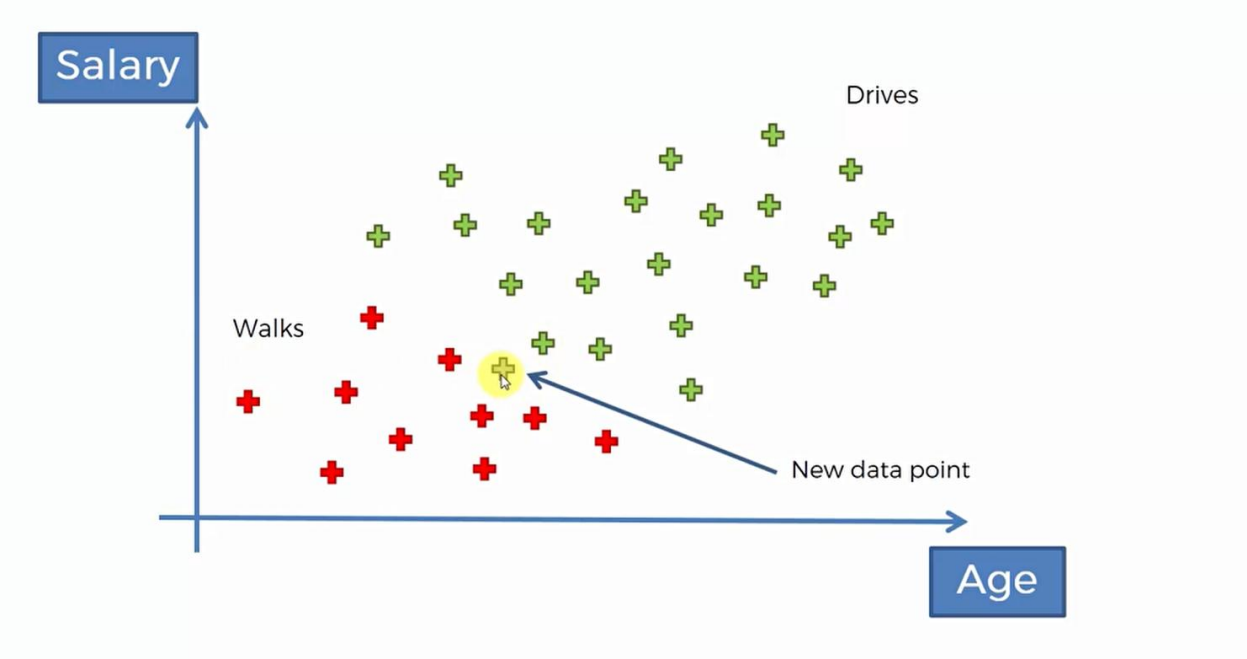
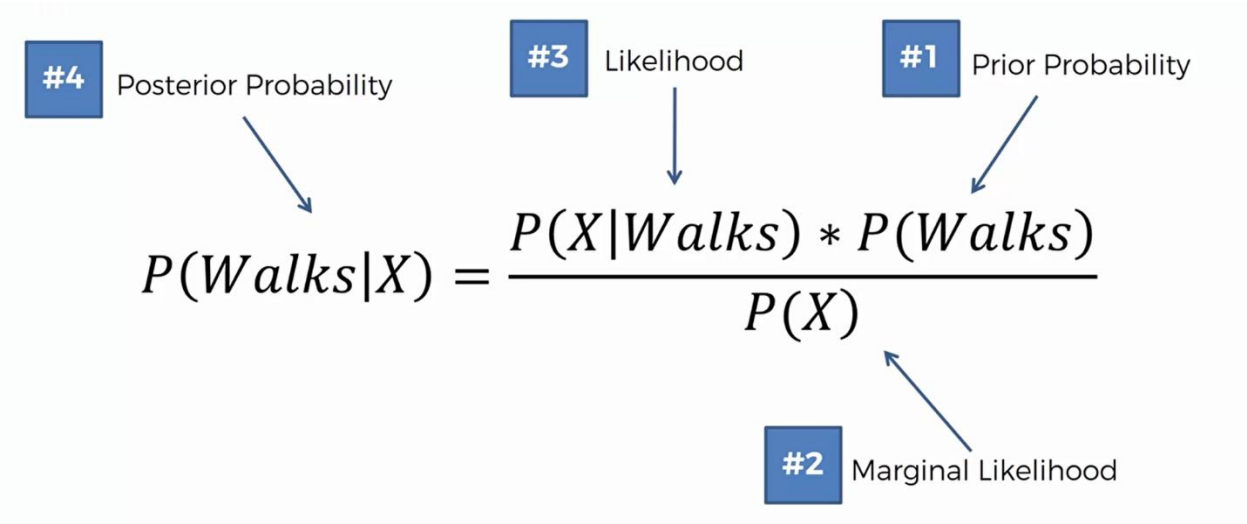

Salary
Drives
Walks
New data point
Age


#4
Posterior Probability
#3
Likelihood
#1
Prior Probability
$P(Walks|X) = \frac{P(X|Walks) * P(Walks)}{P(X)}$
#2
Marginal Likelihood

#4 Posterior Probability

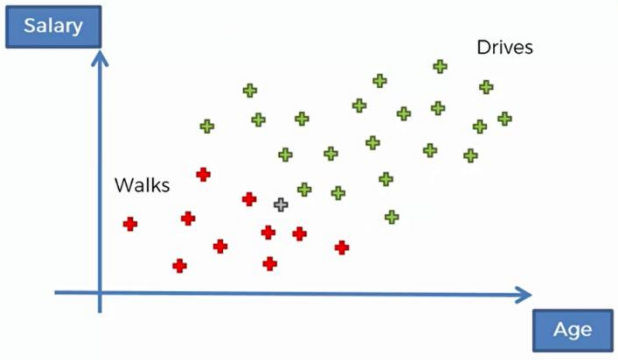
#3 Likelihood

#1 Prior Probability

$$P(Drives|X) = \frac{P(X|Drives) * P(Drives)}{P(X)}$$

#2 Marginal Likelihood

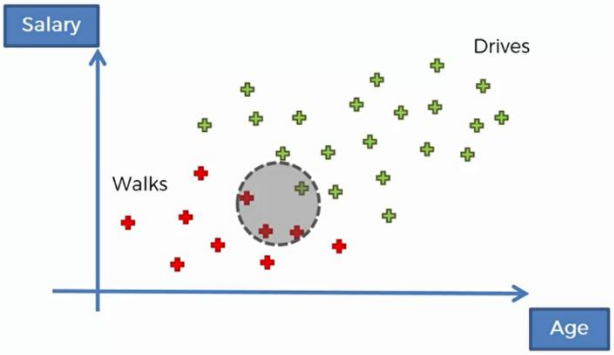
$$P(Walks|X) \; v.s. \; P(Drives|X)$$



#1. P(Walks)

$$P(Walks) = \frac{Number\ of\ Walkers}{Total\ Observations}$$

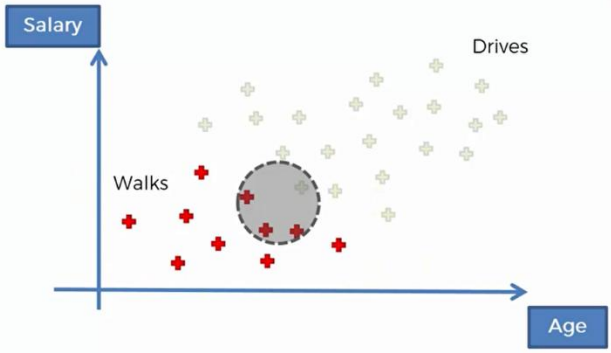
$$P(Walks) = \frac{10}{30}$$



#2. P(X)

$$P(X) = \frac{Number\ of\ Similar\ Observations}{Total\ Observations}$$

$$P(X) = \frac{4}{30}$$



#3. P(X|Walks)

$$P(X|Walks) = \frac{\begin{matrix}Number\ of\ Similar\\ Observations\\ Among\ those\ who\ Walk\end{matrix}}{Total\ number\ of\ Walkers}$$

$$P(X|Walks) = \frac{3}{10}$$

$$P(Walks|X) > P(Drives|X)$$