

PATIENT ID	CHEST PAIN	MALE	SMOKES	EXERCISES	HEART ATTACK
1	yes	yes	no	yes	yes
2	yes	yes	yes	no	yes
3	no	no	yes	no	yes
4	no	yes	no	yes	no
5	yes	no	yes	yes	yes
6	no	yes	yes	yes	no
P(yes)	0.500	0.667	0.667	0.667	0.667
P(no)	0.500	0.333	0.333	0.333	0.333
P(yes & HA = yes)	1.000	0.500	0.750	0.500	
P(yes & HA = no)	0.000	0.500	0.250	0.500	
P(no & HA = yes)	0.333	1.000	0.500	1.000	
P(no & HA = no)	0.667	0.000	0.500	0.000	
Gini Index (yes) = $\sum_{k=1}^K \hat{p}_{mk}(1 - \hat{p}_{mk})$	0.000	0.500	0.375	0.500	
Gini Index (no) = $\sum_{k=1}^K \hat{p}_{mk}(1 - \hat{p}_{mk})$	0.444	0.000	0.500	0.000	
Weighted sum of the Gini Indices = $P(\text{yes}) \times GI(\text{Yes}) + P(\text{no}) \times GI(\text{no})$	0.222	0.333	0.417	0.333	

