

Use delivery number, delivery time, blood pressure, heart problems.

$$\begin{aligned}\text{Gini Impurity} &= 1 - (P_0)^2 - (P_1)^2 \\ &= 1 - \left(\frac{34}{80}\right)^2 - \left(\frac{46}{80}\right)^2\end{aligned}$$

~~Age < 28 yrs?~~
~~Yes = [20, 21]~~
~~No = [14, 25]~~

Don't
use age

~~GI of yes node = $1 - \left(\frac{20}{41}\right)^2 - \left(\frac{21}{40}\right)^2$~~
 ~~$= 0.4997$~~

~~No node = $1 - \left(\frac{14}{39}\right)^2 - \left(\frac{25}{39}\right)^2$~~
 ~~$= 0.4602$~~

~~WGI = $0.4997 \times \left(\frac{41}{80}\right) + 0.4602 \times \left(\frac{39}{80}\right)$~~
 ~~$\neq 0.4804$~~

Delivery number < 2?

yes = [19, 22]

GI of yes = 0.4973

no = [15, 24]

GI of no = 0.4734

$$\begin{aligned}\text{WGI} &= 0.4973 \left(\frac{41}{80}\right) + 0.4734 \left(\frac{39}{80}\right) \\ &= 0.4856\end{aligned}$$

Delivery time < 1?

yes = [16, 30]

GI of yes = 0.4537

No = [18, 16]

GI of no = 0.4983

$$\begin{aligned}\text{WGI} &= 0.4537 \left(\frac{46}{80}\right) + 0.4983 \left(\frac{34}{80}\right) \\ &= 0.4727\end{aligned}$$