



Income = high, Medium, low

Student = yes

Credit = fair, Excellent

$$\text{Age} = 30 \quad \text{Info } (0) = I(2,3) = -\frac{2}{5} \log_2 \frac{2}{5} - \frac{3}{5} \log_2 \frac{3}{5}$$

$$\text{Info income } (0) = \frac{2}{5} I(0,2) + \frac{2}{5} I(1,1) + \frac{1}{5} I(1,0)$$

$$\text{Info std } (0) = \frac{2}{5} I(2,0) + \frac{3}{5} I(0,3)$$

$$\text{Info credit } (0) = \frac{3}{5} I(1,2) + \frac{2}{5} I(1,1)$$

$$\text{Age } 31-40 \quad \text{Info } (0) = I(4,0) = -\frac{4}{4} \log_2 \frac{4}{4} - \frac{0}{4} \log_2 \frac{0}{4}$$

$$\text{Info income } (0) = \frac{2}{4} I(1,1) + \frac{1}{4} I(0,1) + \frac{1}{4} I(1,0)$$

$$\text{Info std } (0) = \frac{2}{4} I(2,0) + \frac{2}{4} I(2,0)$$

$$\text{Info credit } (0) = \frac{2}{4} I(2,0) + \frac{2}{4} I(2,0)$$

$$\text{Age } > 40 \quad \text{Info } (0) = I(3,2) = -\frac{3}{5} \log_2 \frac{3}{5} - \frac{2}{5} \log_2 \frac{2}{5}$$

$$\text{Info income } (0) = \frac{3}{5} I(2,1) + \frac{2}{5} I(1,1)$$

$$\text{Info std } (0) = \frac{3}{5} I(2,1) + \frac{2}{5} I(1,1)$$

$$\text{Info credit } (0) = \frac{3}{5} I(3,0) + \frac{2}{5} I(0,2)$$