



Gender

Male = 6
Female = 3

Payment

Yes = 2
No = 3
Pending = 4

Repayment

A = 3
B = 4
C = 2

T

1 = 4
2 = 3
3 = 2

den Entropy

For T: 1, 2, 3

$$= -\frac{1}{9} \log_2 \left(\frac{4}{9} \right) - \left(\frac{3}{9} \right) \log_2 \left(\frac{1}{9} \right) - \left(\frac{2}{9} \right) \log_2 \left(\frac{2}{9} \right)$$
$$=$$

Repayment

$$= -\frac{2}{5} \log_2 \left(\frac{2}{5} \right) - \left(\frac{1}{5} \right) \log_2 \left(\frac{1}{5} \right)$$

$$= -\frac{1}{2} \log_2 \frac{1}{2} - \left(\frac{1}{2} \right) \frac{1}{2} \log_2 \left(\frac{1}{2} \right)$$

$$P_{\text{avg}} = - \left(\frac{2}{2} \right) \log \left(\frac{2}{2} \right)$$

$$\frac{1}{3} \log \frac{1}{3} - \frac{1}{3} \log \frac{1}{3} - \frac{1}{3} \log \left(\frac{1}{3} \right)$$

$$- \left(\frac{1}{4} \right) \log \left(\frac{1}{4} \right) - \frac{2}{4} \log \left(\frac{2}{4} \right)$$

$$I Q = E Q_{\text{src}} - E P_{\text{avg}}(q_{\text{src}}) - E I_{\text{no}} - E I_{\text{fund}}$$

Channel Entropy

$$\frac{3}{6} \log \frac{3}{6}$$

$$\frac{2}{6} \log \frac{2}{6} - \frac{1}{6} \log \frac{1}{6}$$

$$\text{Entropy}(GF) = -\frac{1}{3} \log \frac{1}{3} - \frac{1}{3} \log \frac{1}{3} - \frac{1}{3} \log \frac{1}{3}$$

$$I Q_{\text{air}} = E Q_c - E Q_m - E Q_F$$