

class in age_computer: ...

$$\text{Info}(D) = I(9,5) = -\frac{9}{14} \log_2\left(\frac{9}{14}\right) - \frac{5}{14} \log_2\left(\frac{5}{14}\right) = 0.940$$

Info

age	p_i	n_i	$I(p_i, n_i)$
≤ 30	2	3	0.971
31...40	4	0	0
> 40	3	2	0.971

$\frac{5}{14}$

$$\begin{aligned} \text{Info}_{\text{std}}(D) &= \frac{7}{14} \left(I(6,1) \right) + \frac{7}{14} \left(I(3,4) \right) \\ &= \frac{7}{14} \left(-\frac{6}{14} \log_2\left(\frac{6}{14}\right) - \frac{1}{14} \log_2\left(\frac{1}{14}\right) \right) + \frac{7}{14} \left(-\frac{3}{14} \log_2\left(\frac{3}{14}\right) - \frac{4}{14} \log_2\left(\frac{4}{14}\right) \right) \\ &= \frac{7}{14} (0.796) + \frac{7}{14} (0.985) \\ &= 0.8905 \end{aligned}$$