

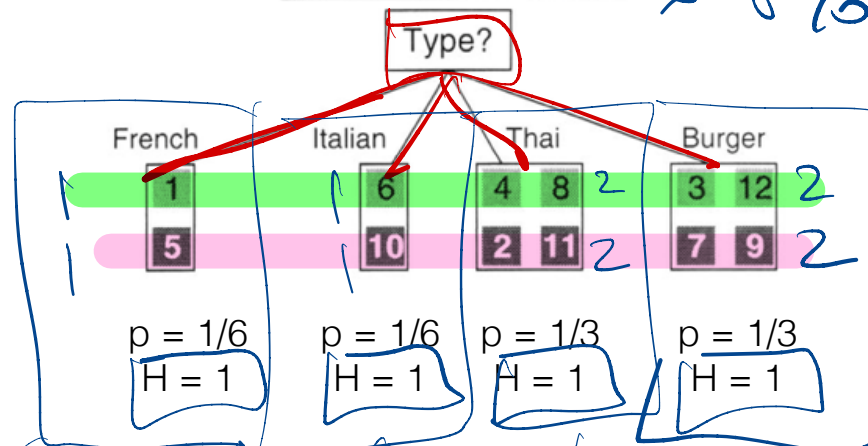
Compare Gain

Split by "patrons" is better!
(more ΔE)

$H=1$

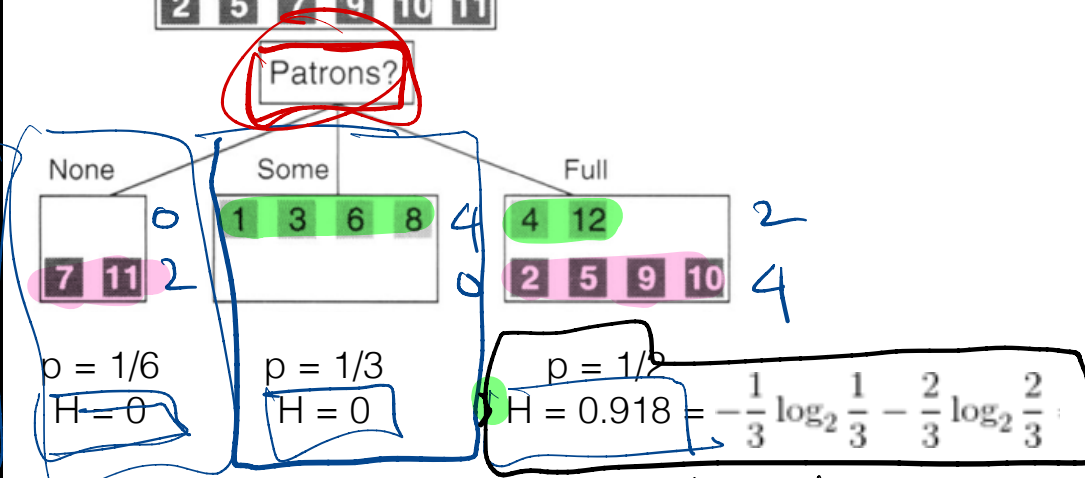
1	3	4	6	8	12
2	5	7	9	10	11

0%
0%



1	3	4	6	8	12
2	5	7	9	10	11

$H=0?$



$\text{prob}(\text{veg}) = \frac{2}{2} = 100\%$

$H(2/6, 4/6) > 0$

Parent Entropy

$$H = -\frac{1}{2} \log_2 \frac{1}{2} - \frac{1}{2} \log_2 \frac{1}{2} = 1$$

E(Child Entropy)

$$\frac{2}{12} \cdot 0 + \frac{4}{12} \cdot 0 + \frac{6}{12} \cdot 0.918$$

≈ 0.459

$$\Delta E_{\text{ent}} = 1 - 0.459 > 0$$

Progress!

$\Delta E_{\text{ent}} = 1 - 1 = 0$ No progress!