

Splitting node: color=red

color=red

skin	size	flesh	class
3 smooth	large	soft	dangerous
5 hairy	small	hard	safe
6 smooth	small	hard	safe
10 hairy	large	hard	safe
13 hairy	small	soft	safe
14 smooth	large	hard	dangerous
15 smooth	small	hard	safe



Entropy of the node [skin=smooth] = $-2/4 \log 2/4 - 2/4 \log 2/4 = 0.30$

Entropy of the node [skin=hairy] = $-3/3 \log 3/3 = 0$

Averaged entropy of the split on skin = $4/7 * 0.30 = \mathbf{0.17}$

Entropy of the node [size=large] = $-1/3 \log 1/3 - 2/3 \log 2/3 = 0.28$

Entropy of the node [size=small] = $-4/4 \log 4/4 = 0$

Averaged entropy of the split on size = $3/7 * 0.28 = \mathbf{0.12}$

Entropy of the node [flesh=soft] = $-1/2 \log 1/2 - 1/2 \log 1/2 = 0.30$

Entropy of the node [flesh=hard] = $-4/5 \log 4/5 - 1/5 \log 1/5 = 0.22$

Averaged entropy of the split on flesh = $2/7 * 0.30 + 5/7 * 0.22 = \mathbf{0.24}$

The best

