

Assignment

Decision Tree

1. You have a set $\{T, T, T, T, T, F, F, F\}$, and split it into $\{T, T, T, T, F\}$ and $\{T, F, F\}$
 - a. What are the entropy values of $\{T, T, T, T, T, F, F, F\}$, $\{T, T, T, T, F\}$, and $\{T, F, F\}$, respectively?
 - b. What is the average entropy of $\{T, T, T, T, F\}$ and $\{T, F, F\}$?
 - c. What is the gain of the split?

Decision Tree

2. Build a decision tree by ID3

	Outlook	Temp	Humidity	Wind	Play
1	Sunny	Hot	High	Weak	No
2	Sunny	Hot	High	Strong	No
3	Overcast	Hot	High	Weak	Yes
4	Rain	Mild	High	Weak	Yes
5	Rain	Cool	Normal	Weak	Yes
6	Rain	Cool	Normal	Strong	No
7	Overcast	Cool	Normal	Strong	No
8	Sunny	Mild	High	Weak	No
9	Sunny	Cool	Normal	Weak	Yes
10	Rain	Mild	Normal	Weak	Yes
11	Sunny	Mild	Normal	Strong	Yes
12	Overcast	Mild	High	Strong	No
13	Overcast	Hot	Normal	Weak	Yes
14	Rain	Mild	High	Strong	No

Thank You