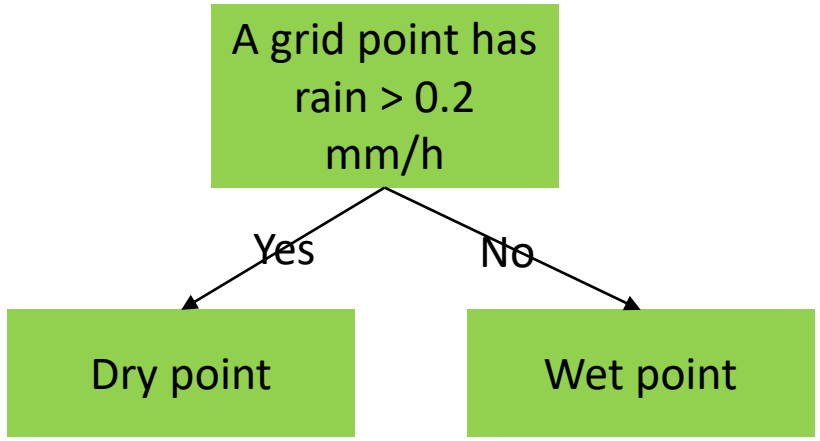
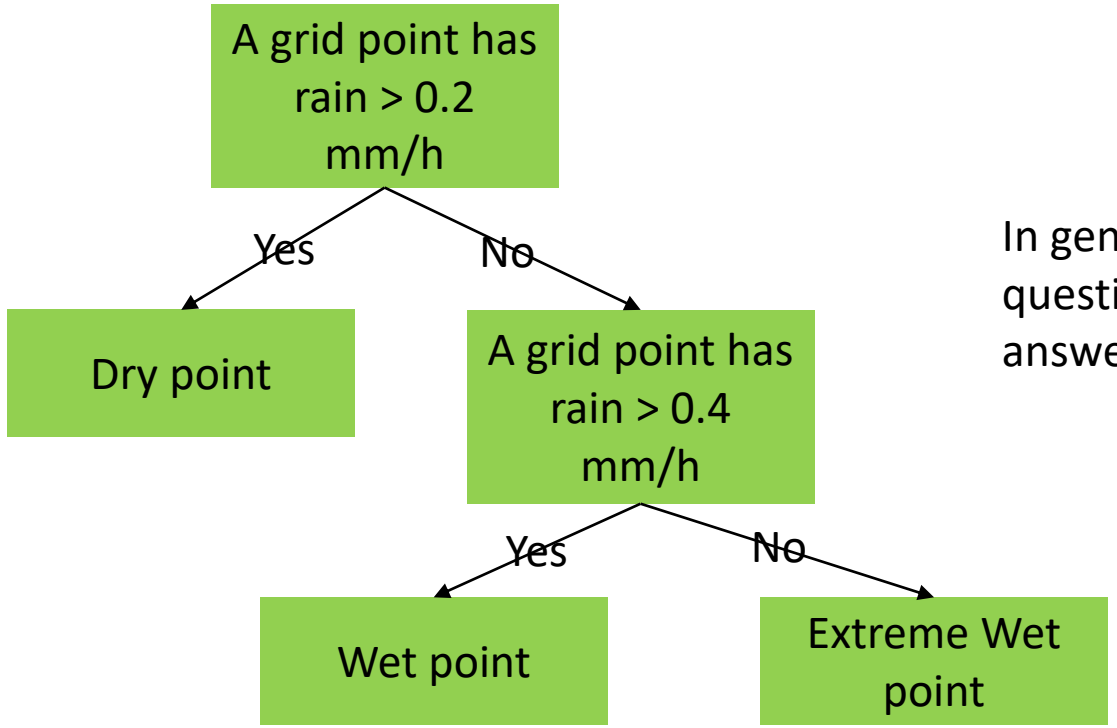
Decision Tree

Regression vs classification



Here is a simple decision tree

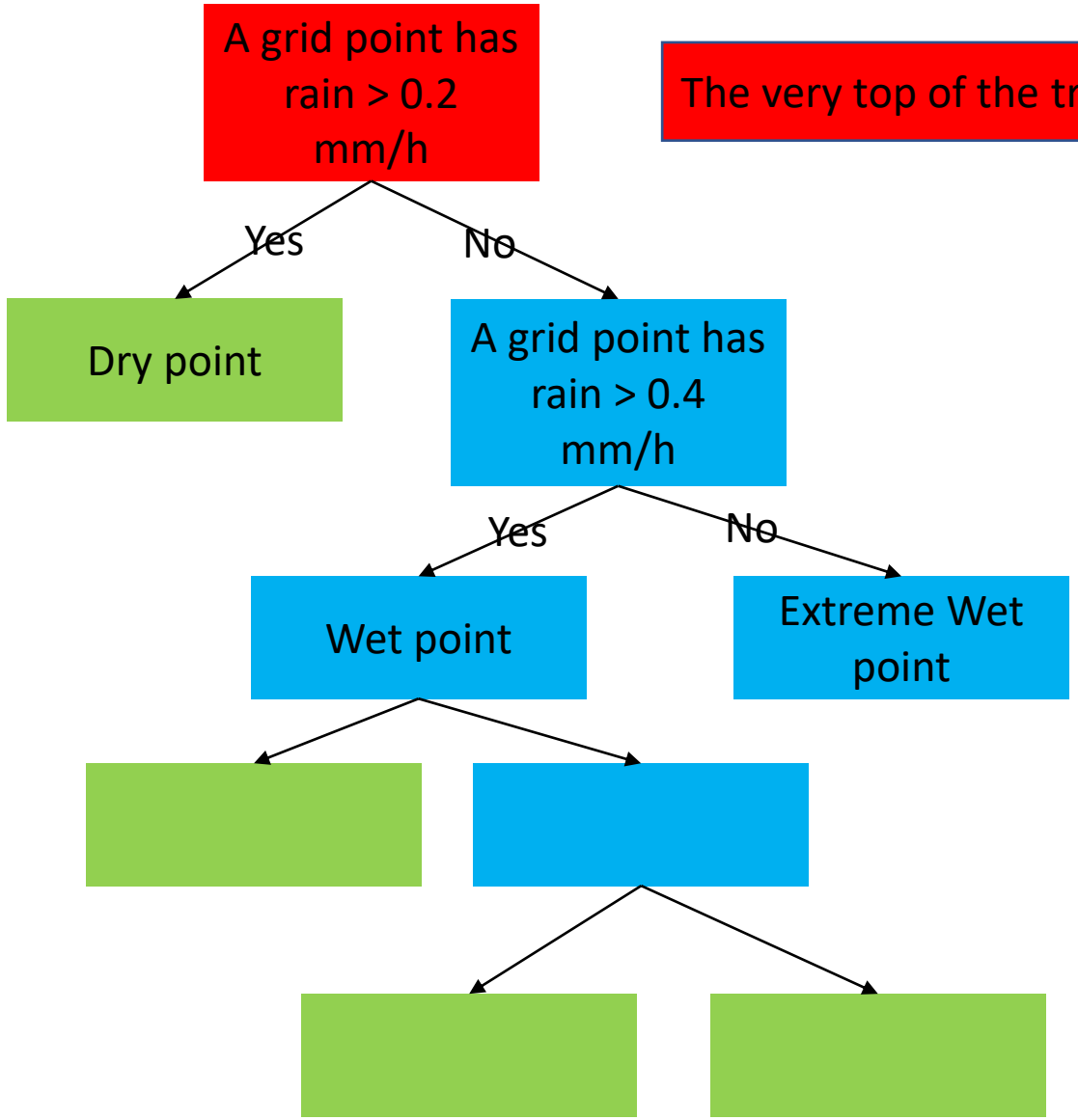
In general, a decision tree asks a question, and grow depends on the answer



In general, a decision tree asks a question, and grow depends on the answer

Decision tree is very intuitive, you start from the top, and work your way down, until you get to a point where you can't go further

Here is a simple decision tree



The very top of the tree is called “root”

The branch of the tree, is called “Internal Nodes”, or “Nodes”
Nodes have arrows point to them, and arrows point away from them

The last layer of the tree, is called “Leaf nodes”, or just leaf.
Leaf have arrows point to them, but no arrows point away from them

Regression tree vs classification tree

Low pressure	High Temperature	High humidity	Wind Speed	Rain
No	No	No	10.0	No
Yes	Yes	Yes	30.0	Yes
Yes	Yes	No	20.0	No
Yes	No	Yes	50.0	No
No	No	Yes	70.0	Yes

classification tree

Discrete data

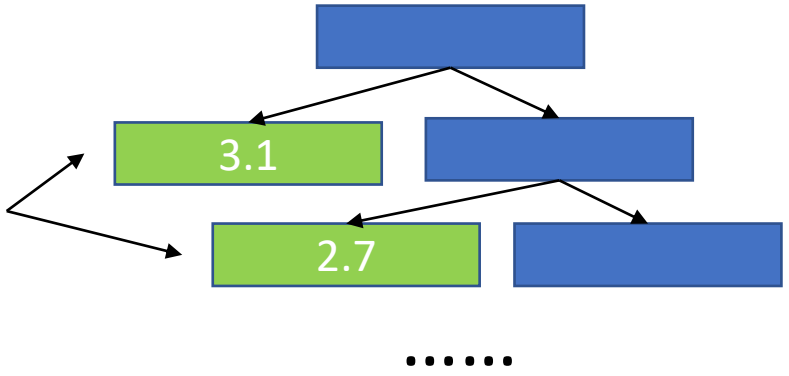
Low pressure	High Temperature	High humidity	Wind Speed	Rain amount
No	No	No	10.0	0.1
Yes	Yes	Yes	30.0	0.3
Yes	Yes	No	20.0	1.0
Yes	No	Yes	50.0	2.1
No	No	Yes	70.0	0.7

Continuous data

Regression tree vs classification tree

Regression tree is a type of decision tree

In a regression tree, each leaf represents a numeric value



Regression tree vs classification tree

Regression tree is a type of decision tree

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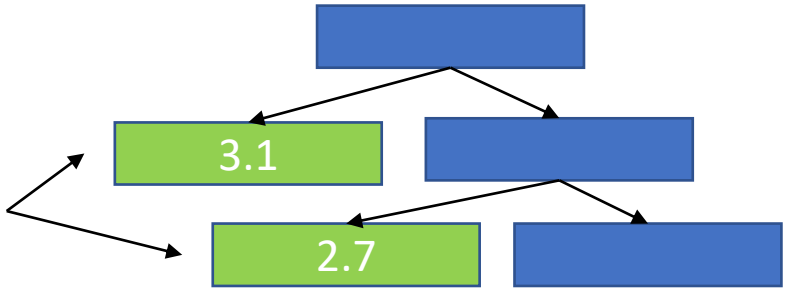
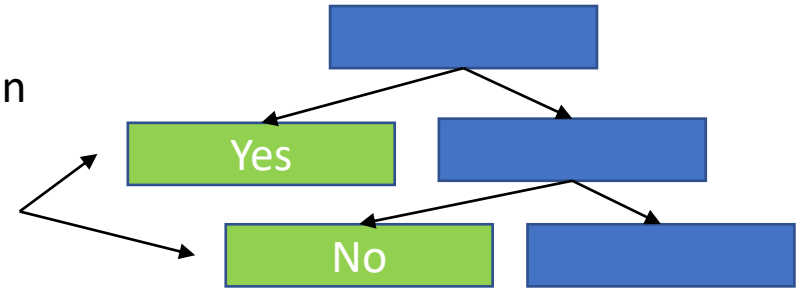


In a classification tree, each leaf represents a Yes/No, or True/False, or some other discrete category



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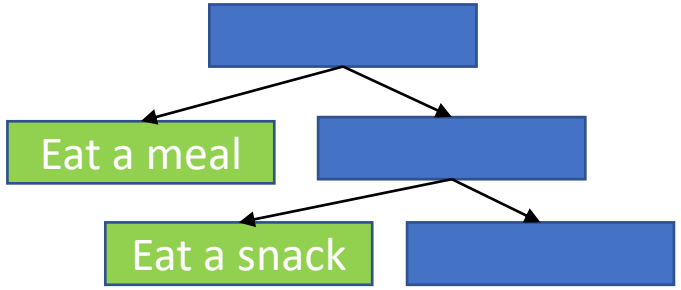

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