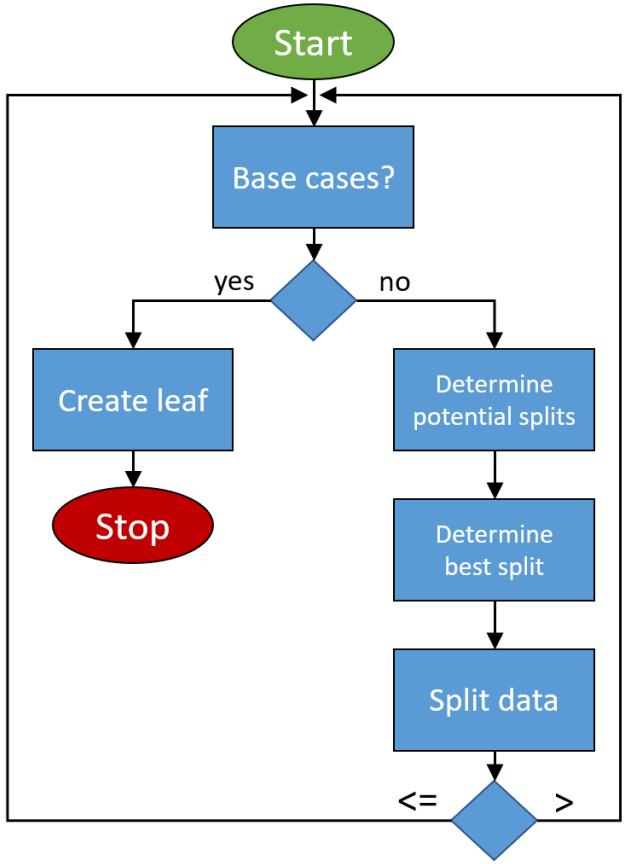
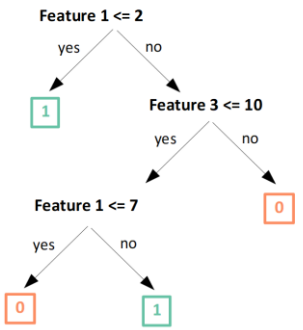
Decision Tree

Training Data

	Feature 1	Feature 2	Feature 3	Label
Example 1				0
Example 2				1
Example 3				1



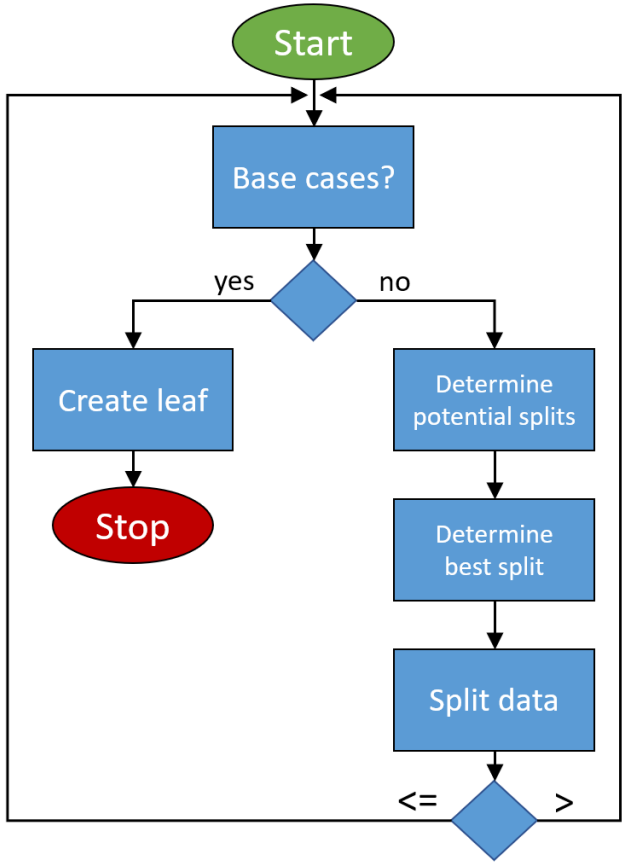
Decision Tree



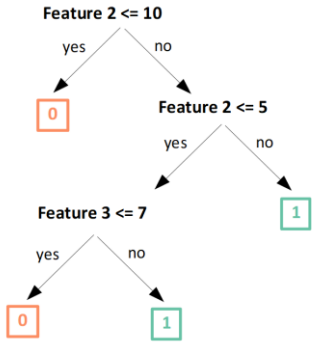
Random Forest

Training Data

	Feature 1	Feature 2	Feature 3	Label
Example 1				0
Example 2				1
Example 3				1

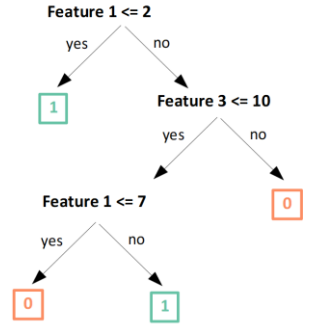


Decision Tree 1



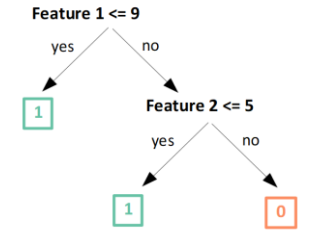
0

Decision Tree 2



1

Decision Tree 3

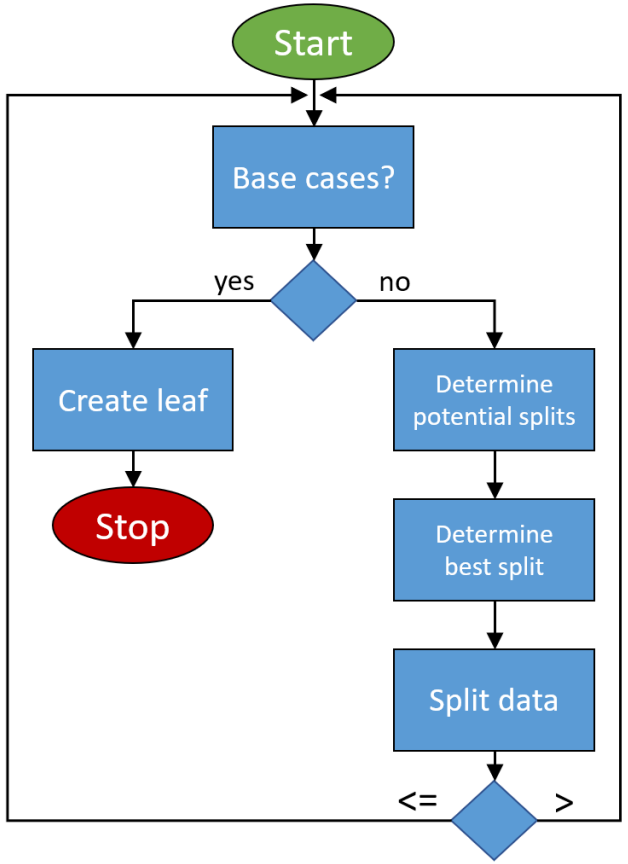


0

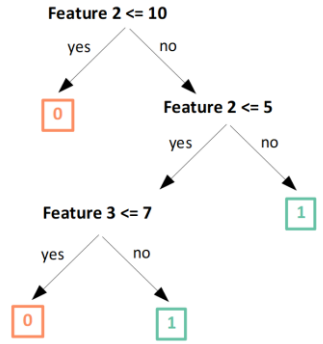
Random Forest

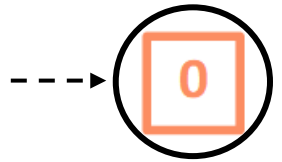
Training Data

	Feature 1	Feature 2	Feature 3	Label
Example 1				0
Example 2				1
Example 3				1

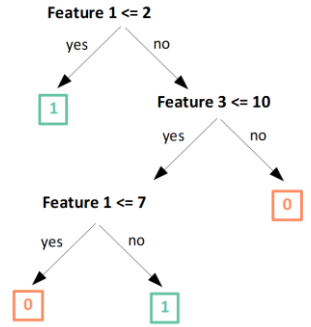


Decision Tree 1

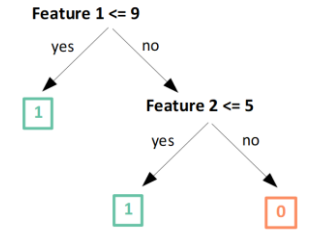




Decision Tree 2



Decision Tree 3



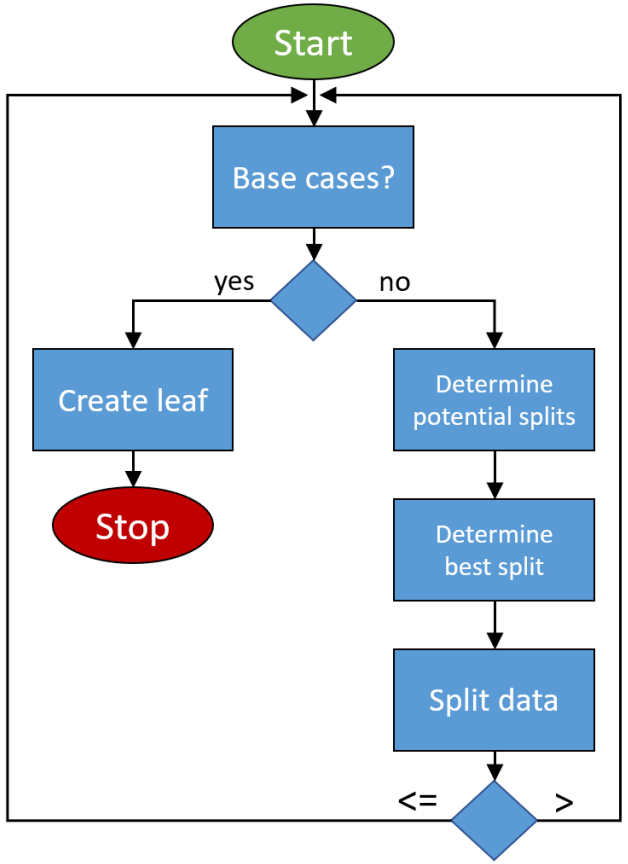
Random Forest

Training Data

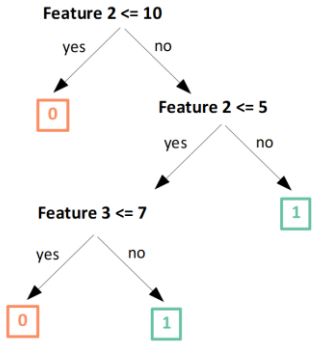
	Feature 1	Feature 2	Feature 3	Label
Example 1				0
Example 2				1
Example 3				1

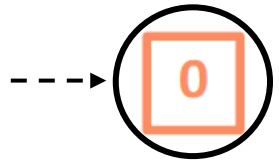
Randomness

Randomness

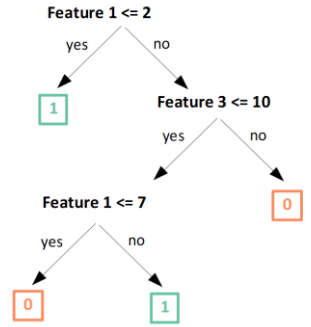


Decision Tree 1

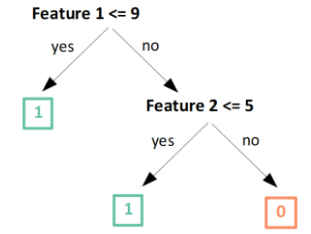




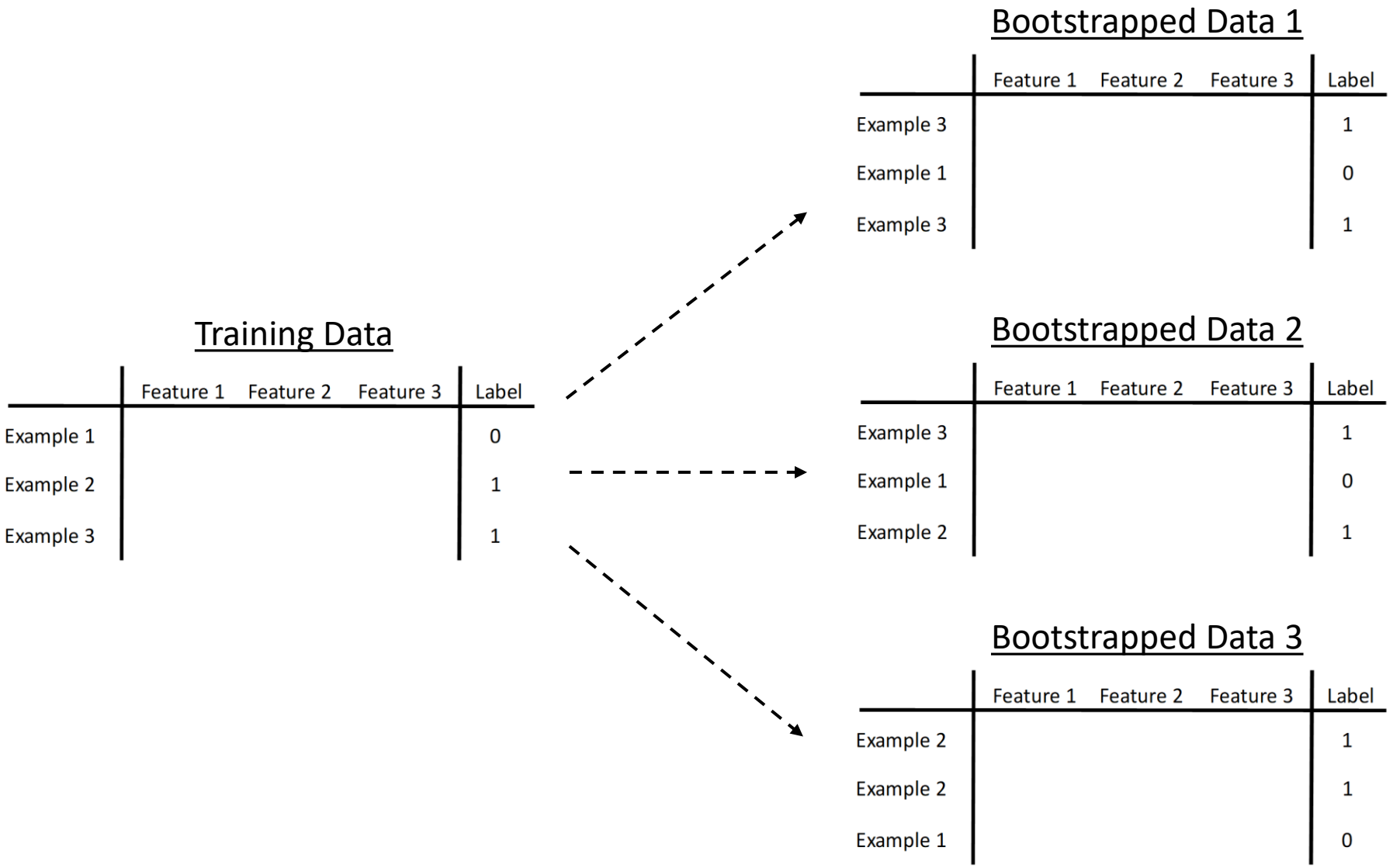
Decision Tree 2



Decision Tree 3



Bootstrapping



Random Forest

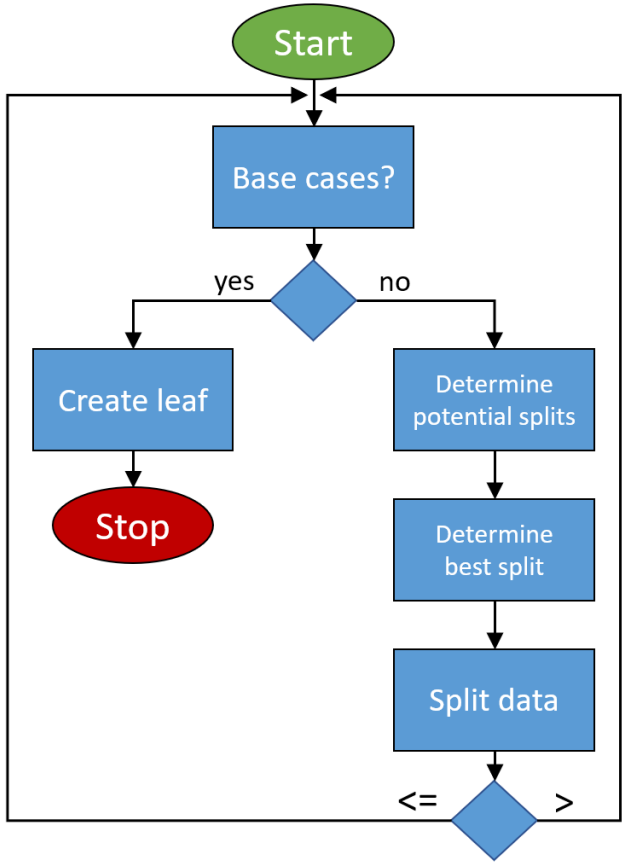
Training Data

	Feature 1	Feature 2	Feature 3	Label
Example 1				0
Example 2				1
Example 3				1

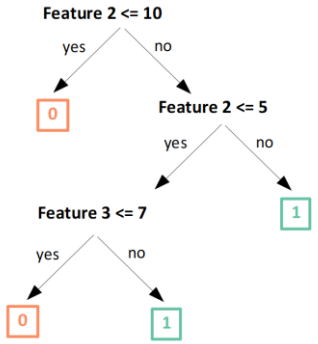
Randomness

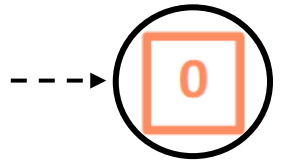
Randomness

Bootstrapping

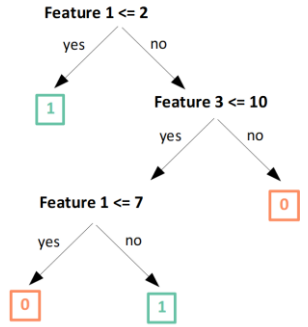


Decision Tree 1

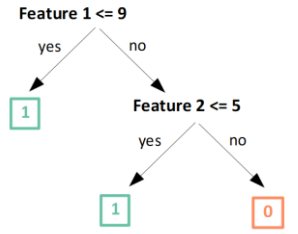




Decision Tree 2



Decision Tree 3



Random Subspace Method

Training Data

	Feature 1	Feature 2	Feature 3	Label
Example 1				0
Example 2				1
Example 3				1

Bootstrapped Data 1

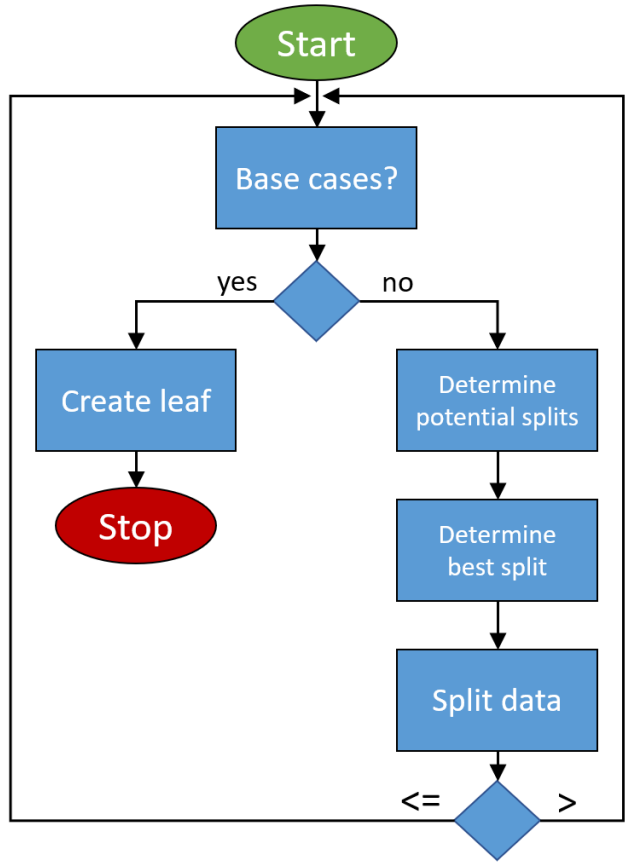
	Feature 1	Feature 2	~~Feature 3~~	Label
Example 3				1
Example 1				0
Example 3				1

Bootstrapped Data 2

	~~Feature 1~~	Feature 2	Feature 3	Label
Example 3				1
Example 1				0
Example 2				1

Bootstrapped Data 3

	Feature 1	Feature 2	~~Feature 3~~	Label
Example 2				1
Example 2				1
Example 1				0



Random Subspace Method

Training Data

	Feature 1	Feature 2	Feature 3	Label
Example 1				0
Example 2				1
Example 3				1

Bootstrapped Data 1

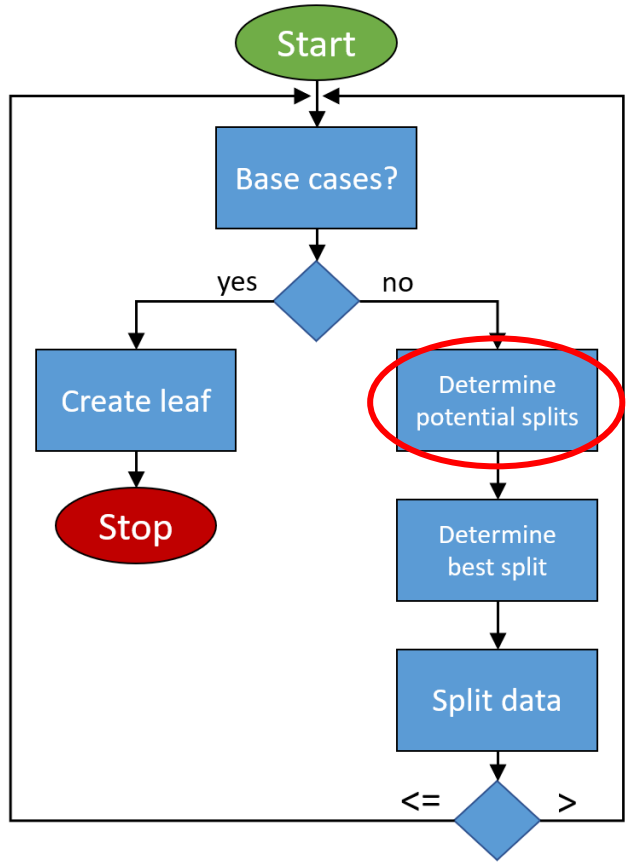
	Feature 1	Feature 2	Feature 3	Label
Example 3				1
Example 1				0
Example 3				1

Bootstrapped Data 2

	Feature 1	Feature 2	Feature 3	Label
Example 3				1
Example 1				0
Example 2				1

Bootstrapped Data 3

	Feature 1	Feature 2	Feature 3	Label
Example 2				1
Example 2				1
Example 1				0



Random Forest

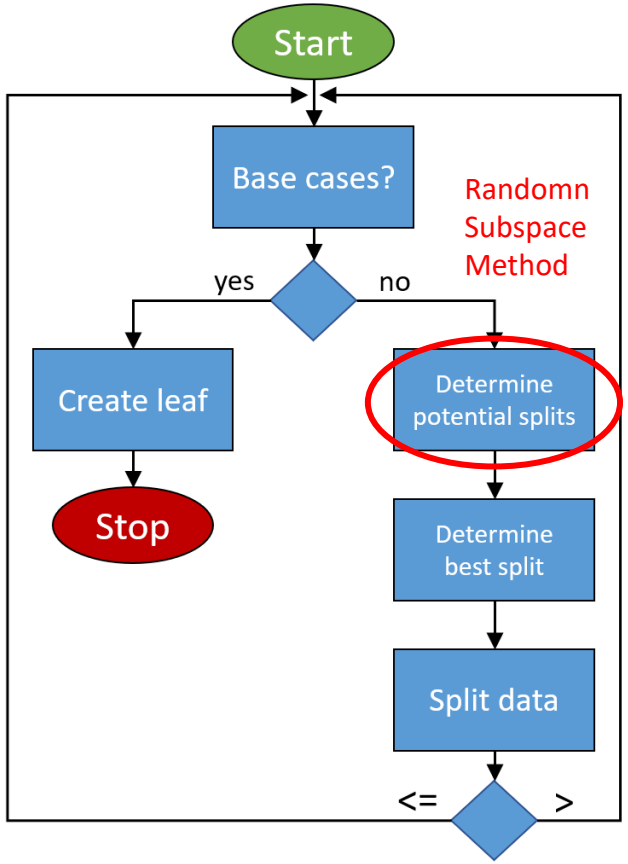
Training Data

	Feature 1	Feature 2	Feature 3	Label
Example 1				0
Example 2				1
Example 3				1

Randomness

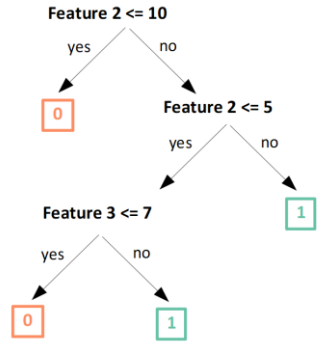
Randomness

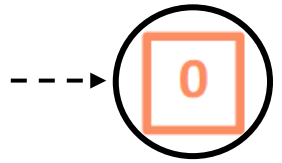
Bootstrapping



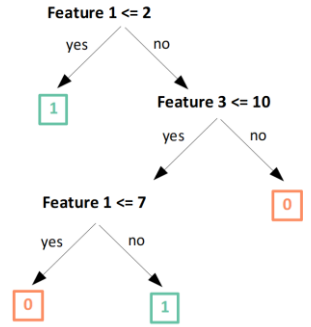
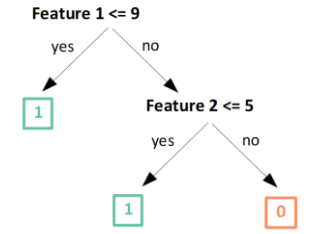
Randomn Subspace Method

Decision Tree 1





Decision Tree 2



Decision Tree 3