1. RF
2. Stacking
3. Practical of Bagging, RF, Stacking

Boosting ← tommorw

Bootstrap ⇒ Way for Sampling

1. Row Sampling
2. Column Sampling
3. Row + Col

{ With replacement
Without replacement }

Weight	Height	Gender	Obesity
65	170	F	NO
70	175	F	O
75	185	M	NO
80	160	F	NO
91	190	M	O

1. With replacement

Sample 1 ⇒ 1, 3
Sample 2 ⇒ 3, 4
Sample 3 ⇒ 1, 2

might be repeated

Repeated

Data is getting repeated.

2. Without replacement

= { Sample 1 ⇒ 3, 4
Sample 2 ⇒ 1
Sample 3 ⇒ 2, 5 }

Row Sampling ⇒ { We are taking a sample from the Row but in every sample we are going to take the entire col. }

? {
Sample 1 1, 2, 3 ⇒ Column (Wt, Ht, Gender)
Sample 2 1, 3, 5 ⇒ Column (Wt, Ht, Gender)
Sample 3 2, 3, 4 ⇒ Column (Wt, Ht, Gender)
}

Column Sampling ⇒ { All the rows, and subset of the columns }

Sample1 ⇒ 5 (subset of columns)

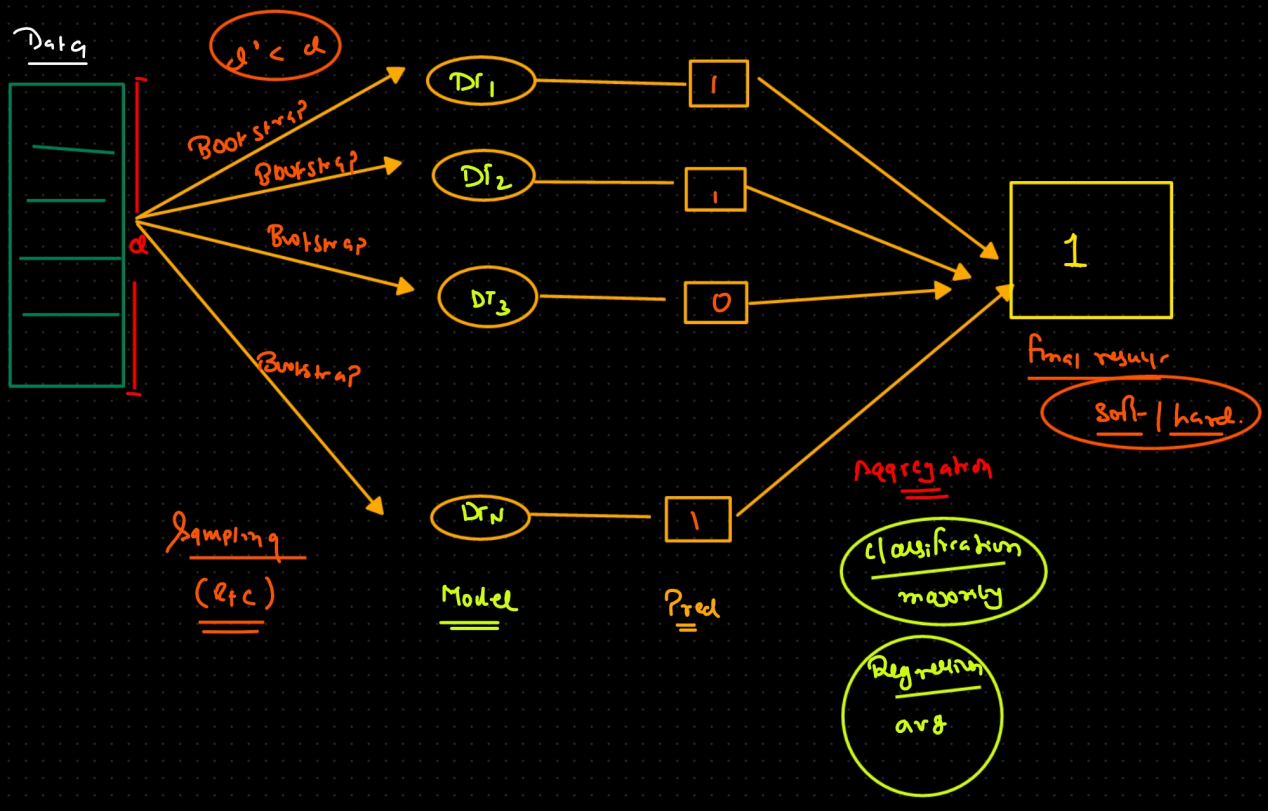
Sample2 ⇒ 5 (subset of the col)

Bootstrap ⇒ Row sample + column sampling

With replacement | without replacement

Random forest ⇒ Special case of the bagging where by default we are using DT

RF = Bootstrap + Agg



Random forest -

↳ Collection of tree

→ Parallely

Bagging

1. It is Parallel
2. Bootstrap + Aggregation
3. It is a homogenous technique
   ↳ same model only

Bootstrap => Sample of the data

↳ (R + C)

↳ With replacement or without repla.