Fitting ENM

Random Forest

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How Random Forest works

1. Create n decision trees.
2. Average or majority voting across all trees.

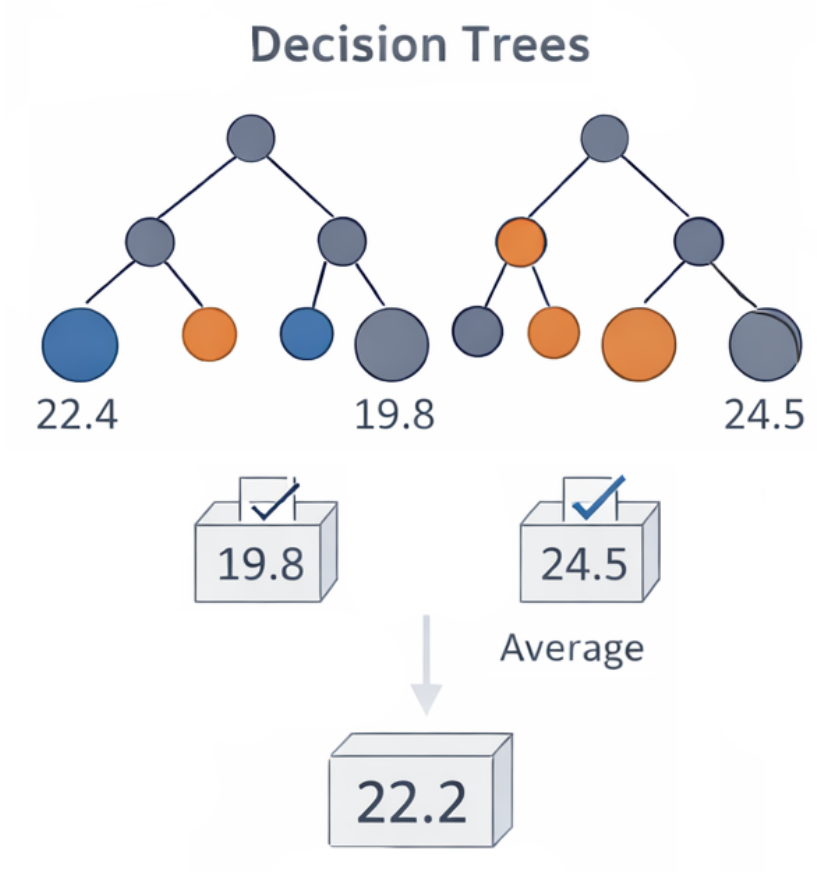

Figure 1: Conceptual representation of Random Forest algorithm

Load virtual species

Already created, just load it.

```
d <- read.csv("../data/virtual.csv")
head(d)
```

```
      BIO01 BIO12 occ
1  9.987156   897   1
2  9.333240   472   1
3  9.853782   663   1
4  7.313562  1025   1
5  6.567688   689   1
6 11.305479   807   1
```

Fitting Random Forest

RF is a powerful machine-learning algorithm that has been applied extensively for ENM.

In *R*, RF is achieved using the package `randomForest` with the following specifications.

```
library(randomForest)

enm <- randomForest(
  occ ~ BIO01 + BIO12,
  data = d
)
```

> **Note**
>
> A warning can be silenced with `as.factor(occ)`, which makes `randomForest()` consider a classification. We do not want this.

Random Forest inferred niche