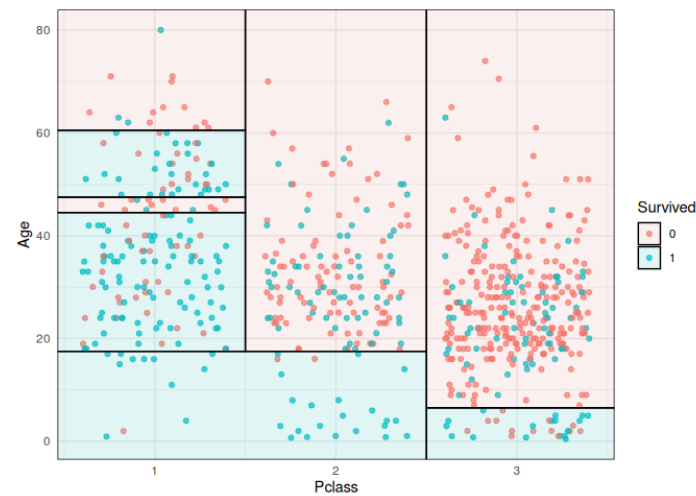


Tree-Based Methods Overview

In this chapter, we will discuss **Tree-Based** methods for both regression and classification, they are **supervised** machine learning algorithm, they are usually the dominate in **tubular data**.



These methods uses **mean Response** value for the training observations in the region to which it belongs also know as **Decision Tree Methods** which all sections on this chapter is built upon, this is the following content and roadmap of this chapter :

Theory :

1. [Decision Trees](#)
2. [Bagging](#)
3. [Random Forests](#)
4. [Boosting](#)
5. [Bayesian Additive Regression Tress](#)

Practical :

6. [XGBoost](#)
7. [LightGBM](#)
8. [CatBoost](#)

Resources used :

- [An introduction to statistical Learning-Chapter-8](#)
- Elements of Statistical Learning- Chapter-9