The bachelor's thesis is devoted to classification and regression trees, their construction, and interpretation. In the first part, the reader gets acquainted with the structure of decision trees, basic definitions, and methodology. In the second part, more advanced and efficient methods for creating such trees using a Bayesian approach to the whole problem are presented. The last part of the work is focused on a practical task, where knowledge from this work is used. The entire text is accompanied by pictures, explanations, and derivations to make it easier for the reader to understand the whole problem in more depth. The thesis Bayesian classification and regression trees can serve all those interested who want to learn more about the issue of decision trees.