

The thesis describes and compares possible approaches and their mathematical base for finding a functional prediction model of the dependent variable with the alternative distribution. The first method is logistic regression. Different levels of logistic regression, estimation of parameters in logistic regression and methods for determining the significance of regressors are described. The second method is decision trees. Different types of decision trees and methods of their construction are described. The application of decision trees in the "Boost" method is also described. The comparison between the described methods is explained. Comparison of methods is carried out on real data to evaluate the effectiveness of advertising in the internet environment. The practical part of the thesis is performed in the program R.