

This bachelor's thesis deals with tolerance intervals, a statistical tool used to quantify the uncertainty of statistical predictions. The introductory part of the text briefly recalls confidence intervals. The thesis then focuses on prediction intervals, which are an intermediate step between confidence intervals and tolerance intervals. Specifically, the prediction interval for normal distribution and nonparametric prediction interval are analyzed. The main part of the thesis then deals with tolerance intervals - the definition, construction of both parametric and nonparametric tolerance intervals, convergence, and actual coverage of the derived intervals. In the final part, an example of the practical application of this tool is presented.