

Abstract of the bachelor's thesis

Title: Parameter estimation of random variables distribution

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Abstract: The subject of this thesis is to compare basic methods by which it is possible to calculate point estimates of discrete and continuous probability distributions. The work deals with the analysis of the two methods - the method of moments and maximum likelihood method. These methods are used for point estimates of probability distributions parameters. The method of moments studies the comparison between the theoretical and sample moments of a random variable. The method of maximum likelihood is another alternative for the calculation of point estimates, which uses the classical approach of finding the maximum of a function, using the properties of random selection. These methods of calculation are based on statistical methods and could be used as an interesting extension of the basic course on probability and statistics at Charles University's Faculty of Education. The work is an overview of the estimated parameters of the basic distribution and compares the quality of two basic methods for their estimation.

Keywords: parameter estimation, distribution of random variables, maximum likelihood method, method of moments