

## ABSTRACT

The thesis is executed on 52 sheets, it contains a list of references to used sources of 5 titles. The paper presents 14 drawings and 6 tables.

The purpose of this thesis is to create mathematical and software tools for calculating the probability of an accident. Using these data, you can specify the most important factor affecting the road accident and develop a plan of counteraction to avoid road accidents.

The paper analyzes the existing solutions of this problem. Unfortunately, there are no existing solutions. To solve the problem in the work the probability method is chosen.

An automated system implementing the chosen method is developed. The testing of the developed system is carried out.

Key words: accident, failure tree, risk, accident factors, accident circumstances, accident conditions.