

## ANNOTATION

This thesis contains 56 sheets, 2 applications and a list of references to used sources of 7 items. There are 4 drawings and 6 tables in the work.

The purpose of this work is to analyze the data of the population census to find social, domestic, economic and political factors that affect the migration of the population. To achieve this, the task was to create and optimize software based on the methods of data mining and programming language R.

Several algorithms for the search for associative rules have been considered and analyzed, namely Apriori, Eclat, Fpgrowth. For writing a software product, Apriori is chosen-an algorithm for in-depth data analysis for frequently-occurring units in sets and machine learning related to associative rules.

In the course of the work, a comparative analysis of existing methods of data mining, a method for solving the problem of data analysis from the population census, a software developed on the basis of the chosen mathematical method and programming language R was selected, tests of the developed software were performed.

**Keywords:** Population Migration, Data Mining, Data Analysis, Associative Rules, Apriori, Programming Language R.