

## ABSTRACT

Master's Thesis: 86 pp., 14 Fig., 30 Tables, 15 Source, 1 Appendix.

Today, every business has to organize its HR department independently and engage in the recruiting process from finding a candidate on job sites to evaluating their knowledge and hiring, and at the same time, the candidate must go through this process again and again. The main problem with this recruiting process is that the recruiting department is usually unable to independently assess the candidate's technical and knowledge skills, such as programming language skills and experience in using modern software creation technologies. The process of developing adequate test tasks requires the involvement of a team of experts and is time consuming. HR staff are forced to seek help from the IT specialists of the company who are directly involved in the software development process.

This skilled search engine requires updating. **The problem is actual** because it is a common problem of the mismatch of the candidates' skills, skills and experience declared in the resume, and their level without the system of assessment is impossible. Also, the method of forming IT profiles of the position does not usually fully reflect the requirements for the competencies of the candidate.

**Relationship with working with scientific programs, plans, topics.** Relationship with working with scientific programs, plans, topics. Work on the system of independent assessment of the competence of IT specialists was held at Raiffeisen Bank Aval JSC during the modernization of the system of control of the level of qualification of the employees of the Raiffeisen Bank Aval Financial Academy within the framework of the scientific initiative topic "Investigation of ways of credit recognition by European Credit System in credit mobility." (No. DR 0117U000925). During the course of the practice, an analysis of the existing algorithm for assessing the competence of the Bank's employees was carried out, and it was suggested to use MASTIS publications as a rule for creating new tests.

**The purpose of the study** is to increase the efficiency of recruitment in an IT company and to continuously evaluate the level of competence for employees by automating the process of testing.

To achieve these goals, you must complete the following tasks:

- analyze competency assessment processes and existing approaches to their automation;
- to select the evaluation model for the test approach;
- to develop an algorithm for evaluating the results of passing test tasks;
- to develop software implementation for a system of testing and evaluation of results.

**The object of the study** is an independent automated assessment of the competencies of IT specialists.

**The subject of the study** are methods and models of assessing the competence of IT specialists.

**Scientific novelty of the obtained results.**

The approach of using tests to evaluate modern requirements for competencies of IT specialists based on the mathematical model of Rush is developed. The evaluation method is integrated into the web application.

**Testing the results of the thesis.**

The results of the research included in the dissertation have been published at the following scientific conferences:

- 3 All-Ukrainian Scientific and Practical Conference of Young Scientists and Students "Information Systems and Management Technologies" (ISTU-2019);

- International Scientific Internet Conference "Information Society: Technological, Economic and Technical Aspects of Becoming" (Issue 43).

### **Publications.**

The materials of the work were published in the scientific journal "Young Scientist", in the abstracts of the international scientific Internet conference "Information Society: Technological, Economic and Technical Aspects of Becoming" and the III All-Ukrainian Scientific and Practical Conference of Young Scientists and Students "Information Systems and Technologies of Management".

### **Keywords.**

TESTING, MODERN TESTING THEORY, RASH MODEL, COMPETENCE, RELIABILITY, TESTING, HANDLING, LIKELIHOOD OF COMBINATION, COMBINES, COMBINES