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NEURO-FUZZY INFORMATIONAL MODEL OF ASSESSMENT OF DEVELOPERS OF START-UP PROJECTS

Introduction. Today's brilliant start-up idea does not mean a successful business in the future. For any project, there are people who implement it. Even for a very good start-up project, with a very high score and prospects for success, successful commercialization depends, to a greater extent, on the qualitative composition of the developers, ready to bring the product to the market and successfully decide on its sale. Therefore, investors in start-ups like to say that they primarily invest in a team that the success or failure of a project depends largely on the team of developers.

The urgency of the work is to develop a model for estimating start-ups of teams using a neuro-fuzzy network when there are only expert fuzzy data on the team of developers. The development of such a model will allow increasing the degree of validity of financing start-up projects since the success of the start-up implementation directly depends on the qualitative composition of the team of developers. The lack of models, which allows us to assess the prospects of implementation of the start-up project team developers, proves the relevance of the study.

Formulation of the problem. Recent research suggests the need to systematize tools and develop algorithms for evaluating commands developers start-up projects. The holistic concept for defining the level of teams of developers' ratings has not yet been developed for the successful implementation of start-ups of projects to take into account the subjective aspects of evaluation. Thus, the problems of project start-up evaluation are raised in the work [1], where the fuzzy set is used and the existing group of criteria "authors of the idea" is used, but not enough attention is paid to the analysis of the teamwork on the project. In the work [2] the task of informational modeling of the selection of a group of experts for different research objects is solved, but it is not indicated on what indicators it is possible to estimate teams of developers. Analyzing a large number of literary data, we conclude that there are no special models for evaluating and withdrawing the ratings of developers implementing the start-up projects.

Fuzzy exclusion systems can use human expertise and perform fuzzy output to obtain initial estimates. Formation of rules and related membership functions very much depends on a priori knowledge of the system under consideration. Therefore, there is no universal way of transforming the experimental knowledge of human experts into the knowledge base of the fuzzy output system. Therefore, there is also a need to develop teaching methods for obtaining an initial assessment with the required level of accuracy [3-4]. In addition, the mechanism of training neural

networks does not rely on human expertise, but through a homogeneous structure of neural networks [5] it is difficult to extract structured knowledge. Therefore, for the task of evaluating and withdrawing the rating of the team of developers of the start-up projects, it is necessary to develop its own neuro-fuzzy network, working with fuzzy expert input signals and based on the knowledge base displays adequate results. Recent scientific studies indicate the need to develop such a model.

The purpose of scientific work is to develop an informational model for evaluating and eliminating the ranking of start-up teams using neuro-fuzzy network. To achieve the goal of scientific research it is necessary to solve such problems:

- Formulate a set of criteria for evaluating teams of developers of start-up projects, to provide input in the form of linguistic terms and coefficients of expert confidence in their assignment;
- Formulate the level of the rating of the teams of developers and production rules of the fuzzy knowledge base;
- Develop a neuro-fuzzy model for obtaining the resulting score and comparing it with the rating of teams of developers of start-up projects to build their ranking range;
- To approach the learning of the developed neuro-fuzzy network to determine the boundaries of decision-making and describe the general algorithm for constructing the resulting evaluation team start-up;
- Test the research on real data.

Conclusions. The developed neuro-fuzzy information model of the output of the ranking of start-up teams will be a useful tool for substantiating the choice of teams by investors for the implementation of their projects.

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