OPINION

by Assoc. Prof. Dr. Eng. Vladimira Krasteva Ganchovska

Member of the Department of Computer Systems and Technologies at the University of Food Technology - Plovdiv

of a dissertation for the award ofeducational and scientific doctorate degree

in: field of higher education 5. Technical sciences

professional field 5.3 Communication and computer technology

Doctoral program Automation of areas of the intangible sphere (medicine, education, science, administrative activities, etc.)

Author: Anna Ilieva Bekyarova-Tokmakova

Topic: Technology-based solutions for process management in telecommunications

Scientific supervisor: Prof. Dr. Nevena Stoyanova Mileva, Plovdiv University "Paisii Hilendarski"

1. General presentation of the procedure and the doctoral student

The set of materials on paper presented by Anna Ilieva Bekyarova-Tokmakovacarrier is compliant with Art.36 (1) of the Regulations for the Development of the Academic Staff of the University of Plovdiv, includes the following documents:

– a request to the Rector of the University of Plovdiv to disclose the procedure for defending a dissertation;

– CV in European format;

– minutes from the department council, related to reporting the readiness to open the procedure and preliminary discussion of the dissertation work;

– dissertation;

– abstract;

– a list of scientific publications on the topic of the dissertation;

– copies of scientific publications;

– list of noted citations;

– declaration of originality and authenticity of the attached documents;

– a certificate of compliance with the specific requirements of the respective faculty.

Anna Ilieva Bekyarova-Tokmakova, was born on 25.08.1971. On 26.01.2021, the candidate was enrolled in full-time doctoral studies by order No. P33-268 of the Rector of PU "P. Hilendarski". The doctoral student's many years of professional experience (from 2006 to 2020) in the field of telecommunications, including in management positions, provides a valuable practical context for the research, allowing for in-depth analysis and development of technology-based solutions tailored to

the real challenges in process management in the sector. From 01.03.2024, the doctoral student is enrolled with the right to defense.

2. Relevance of the topic

In today's digital world, telecommunications play a crucial role in interpersonal connectivity. Innovations related to communication technologies are transforming the ways in which people and devices interact. In addition to facilitating communication, innovations are also associated with stimulating economic growth and creating new business models and services.

The dissertation examines the topic of optimizing business process management in the telecommunications sector, which directly correlates with the above and is evidence of the relevance of the problem.

3. Knowing the problem

The overview part of the dissertation is 41 pages long. 132 literary sources are included, most of which are from the last 10 years. This shows that the doctoral student has become deeply familiar with the topic and contemporary trends in solving the tasks of the dissertation.

4. Research methodology

I believe that the methodology chosen by the doctoral student for the design and development of a technology-based system for managing the churn process of business customers in telecommunications meets the set goals and objectives.

5. Characterization and evaluation of the dissertation work and contributions

The dissertation has a volume of 178 pages. It consists of a title page, content, introduction, an exposition presented in three chapters, conclusions and directions for future development, a declaration of originality and a bibliography. The first chapter examines modern solutions and opportunities for implementing artificial intelligence both to improve the efficiency and reliability of systems and to reduce costs and optimize resources. The second chapter describes in detail the stages (1. Identification and collection of data; 2. Data preprocessing; 3. Data separation; 4. Training of a predictive model; 5. Validation of the results) of designing and developing a technology-based system for managing the Retention of business customers in telecommunications process. An analysis of the experimentally obtained results is made in the third chapter.

The doctoral student has presented a total of 9 contributions in the dissertation work, 5 of which are defined as scientific and scientifically applied and 4 as applied. I believe that the defined contributions meet all the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria (LAADRB), the Regulations for the Implementation of the LAADRB and the relevant Regulations of the University of Paisii Hilendarski. The contributions reflect the achieved results and are directly related to the set goals and objectives.

6. Assessment of the doctoral student's publications and personal contribution

A total of 3 articles (two co-authored and one independent) are included as titles to the dissertation. One of the articles is referenced in the global databases Scopus and Web of Science, one only

in Scopus and one in the National Reference List of Contemporary Bulgarian Scientific Publications with Scientific Review. The total number of points achieved in this indicator is 53, which exceeds the minimum national requirements for acquiring the ONS "doctor" (50 points).

7. Autor's abstract

The abstract submitted for review is 32 pages long and meets national requirements. It includes both the research methodology and the main results and analyses.

8.Recommendations for future use of the dissertation contributions and results

Based on the results obtained in the dissertation, I believe that in the future the doctoral student may consider expanding the application to other industries. The methods and models can be adapted to predict customer behavior in sectors such as insurance, banking, e-commerce, etc.

CONCLUSION

The dissertation submitted for review fully complies with the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria (ADSRB), the Regulations for the Implementation of the ADSRB and the relevant Regulations of the Paisii Hilendarski University. I believe that the doctoral student Anna Ilieva Bekyarova-Tokmakova demonstrates a high level of theoretical preparation and established professional competencies.

Based on the received scientific, scientific-applied and applied contributions, I give my positive assessment of the dissertation work. I propose to the esteemed scientific jury to award the educational and scientific degree "doctor" to Anna Ilieva Bekyarova-Tokmakova in the field of higher education 5. Technical sciences, professional field 5.3 Communication and computer technology, doctoral program Automation of areas of the intangible sphere (medicine, education, science, administrative activities, etc.)

24.02. 2025 years **Prepared the opinion**: .....

/Assoc. Prof. Vladimira Ganchovska /