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Facultatea Electronică și Telecomunicații
Departamentul Telecomunicații și Sisteme Electronice**

**Admis la susținere
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**AUTOMATIZAREA MONITORIZĂRII
FUNCȚIONALITĂȚII REȚELELOR DE COMUNICAȚII
PRIN INTEGRAREA INTELIGENȚEI ARTIFICIALE**

Proiect de licență

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Chișinău 2024

ADNOTARE

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Tema: Automatizarea monitorizării funcționalității rețelelor de comunicații prin integrarea inteligenței artificiale

Structura lucrării: Lucrarea este compusă din copertă, pagină de titlu, caietul de sarcini, avizul, declarație, adnotarea, introducere, capitolul 1, capitolul 2, capitolul 3, concluzie, bibliografie, anexe.

Cuvinte cheie: Inteligența artificială (IA), Cisco DNA Center, IBM, SDN controler, învățare automată (ML)

Scopul lucrării: Analiza aportului inteligenței artificiale în cadrul automatizării monitorizării rețelelor

Obiectivele lucrării:

- Cercetarea monitorizării rețelelor de telecomunicații moderne
- Studiarea modului de implementarea a inteligenței artificiale
- Aportul inteligenței artificiale pentru monitorizarea rețelelor
- Automatizarea rețelelor de telecomunicații
- Analiza eficienței economice a implementării inteligenței artificiale

Metodele aplicate la elaborarea lucrării: sistemul Cisco DNA Center

Rezultatele obținute: Drept urmare a analizei efectuate s-a constatat aportul semnificativ adus de către inteligența artificială pentru procesul de automatizare a monitorizării rețelelor. Abilitatea de determinare preventivă a eșecurilor sau erorilor ce pot apărea în rețea și care în consecință conduc către indisponibilitatea acestora reprezintă un aspect solid pentru procesul de funcționare a întreprinderilor, precum și pentru prevenirea tuturor costurilor ce apar ulterior. Inteligența artificială s-a prezentat drept o unealtă esențială în procesul de dezvoltare a calității de funcționare a rețelelor și a nivelului sporit de securitate.

ANNOTATION

Author: Victor Sclifos. IMTC group – 201

Topic: Automating the monitoring of communication network functionality by integrating artificial intelligence

The structure of the work: The thesis is composed of the chapter, title page, table of contents, notice, declaration, annotation, introduction, chapter 1, chapter 2, chapter 3, conclusion, bibliography, annex.

Keywords: Artificial Intelligence (AI), Cisco DNA Center, IBM, SDN controller, Machine Learning (ML)

The purpose of the project: Analysis of the contribution of artificial intelligence in the automation of network monitoring

Objectives of the project:

- Monitoring research of modern telecommunication networks
- Studying how to implement artificial intelligence
- The contribution of artificial intelligence to network monitoring
- Automation of telecommunications networks
- Analysis of the economic efficiency of the implementation of artificial intelligence

The methods applied to the elaboration of the work: the Cisco DNA Center system

Results obtained: As a result of the analysis carried out, it was established the significant contribution brought by artificial intelligence to the process of automating network monitoring. The ability to proactively determine failures or errors that may occur in the network and which consequently lead to its unavailability represents a solid aspect for the operation process of enterprises, as well as for the prevention of all the costs that arise afterwards. Artificial intelligence has emerged as an essential tool in the process of developing the quality of network operation and the increased level of security.

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<i>Contr. norm.</i>	<i>Tîrșu V.</i>							
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