



Published by
AlMaarif University College, Ramadi, Iraq



Volume (1), Issue (1), 2021

# A Scientific Peer-Reviewed Periodical Journal

# Published by:

Al-Maarif University College (AUC) Ramadi City, Provence of Anbar P.O. Box: 330, Iraq



#### **Editor in Chief**

#### Assoc. Prof. Dr. Mohammed Abdulhakim Alsaadi

National Chair of Material Science and Metallurgy, University of Nizwa Sultanate of Oman

m.hakim@uoa.edu.iq

### **Managing Editor**

#### Asst. Prof. Dr. Mohamed Khalid AlOmar

Department of Civil Engineering, AlMaarif University College Republic of Iraq

mk.alomar@uoa.edu.iq

#### **Editors:**

**Prof. Dr. Ayad Abdulrazaq Muttar** AlMaarif University College, Iraq

E-mail: a.a.mutar@uoa.edu.iq

**Prof. Dr. Farook S. Majally** Sultan Qaboos University, Oman E-mail: farougsm@squ.edu.om

**Prof. Dr. Qusay F. Alsalhy**University of Technology, Iraq
E-mail: 80006@uotechnology.edu.iq

Assoc. Prof. Dr. Ahmed Falih Albayaty

Al-Nahrain University, Iraq E-mail: <a href="mailto:ahmed-lbyt@yahoo.com">ahmed lbyt@yahoo.com</a> Assoc. Prof. Dr. Khalid Shaker Jasim

University of Al-Anbar, Iraq E-mail: <a href="mailto:khalidalhity@gmail.com">khalidalhity@gmail.com</a>

Assoc. Prof. Dr. Rami Hikmat ALHadeethi

University of Jordan, Jordan E-mail: rhfouad@yahoo.co.uk

Asst. Prof. Dr. Mohamed Ibrahim AlMaarif University College, Iraq E-mail: m.i.khalaf@uoa.edu.iq

Asst. Prof. Dr. Mohammed Basil Alani

AlMaarif University College, Iraq E-mail: <u>f\_com22@yahoo.com</u>

# **Table of Content:**

No.	Title	Page
1	Issue Preface	I-IV
2	Anomaly Intrusion Detection Based on Recurrent Neural Networks	1-12
3	Fraud Classification and Detection Model Using Different Machine Learning Algorithm	13-22
4	Improving Intrusion Detection System Based On Long Short-Term Memory and Principal Component Analysis	23-32
5	A Survey On Fraud Detection Techniques in E-Commerce	33-47
6	Insider Attacker Detection Based On Body Language and Technical Behavior Using Light Gradient Boosting Machine (LightGBM)	48-66
7	Insider Attacker Detection Using Light Gradient Boosting Machine	67-76

#### Issue introduction

#### *B*v:

# **Assoc. Prof. Dr. Mohammed Abdulhakim Alsaadi**Editor in Chief

In the name of Allah, the most gracious the most merciful.

This is the inaugural issue of Tech-knowledge Journal (TNJ). This journal is a multi-disciplinary, open access, peer-reviewed, and bi-annual aims to publish original research with an active contribution to the scientific and academic society. The journal mutually adopts Arabic and English languages to publish research and is careful to use scientific terminology in both languages while adhering to a clear and balanced writing style.

Before 2021 the Journal of AlMaarif University College (JAUC) used to be issued with a very wide abroad of multidisciplinary topics covering all the branches of humanitarian and technical sciences. Eventually, the decision has been taken to split the technical part and issue a new English media publication (TNJ) while continuing (JAUC) in presenting literature and humanitarian knowledge and sciences.

This issue enclosed articles discussing very important approaches in modern scientific and research technical methodologies related to artificial intelligence although it came with a limited number of articles. Nevertheless, (TNJ) is open to all research activities in science and technology.

The editorial team has the ambush to improve the quality of this journal to meet the international academic standards by encouraging the young researchers to present their findings and distinguished contribution to technology.