



**IEEE 4th International Conference on Computing and Machine  
Intelligence**  
**April 05-06, 2025**  
**Central Michigan University**

# **CERTIFICATE**

## **of Participation**

**This certificate is presented to**  
**Laith Jumma**

**For participating and presenting the  
paper titled:**

**Malware Detection in Internet of Things Devices  
Through the Utilization of Deep Sparse  
Autoencoders and Signal Processing Methods**

A handwritten signature in blue ink, appearing to be "Ah".

**General Chair**  
**Ahmed Abdelgawad, PhD**