

# **Role of User Entity and Behavior Analytics (UEBA) in Cybersecurity: A Study**

**Shambhavi Sharma<sup>1</sup>, K Sampath Kumar<sup>2</sup>, Pramod Kumar Jha<sup>3</sup>**

Scientist –‘B’, IT, CAS, DRDO, Hyderabad, India<sup>1</sup>

JRF, IT, CAS, DRDO, Hyderabad, India<sup>2</sup>

Scientist –‘G’, IT, CAS, DRDO, Hyderabad, India<sup>3</sup>

**Abstract:** *User Entity and Behavior Analytics (UEBA) is emerging as a disruptive technology in the areas of cybersecurity, empowering organizations to detect technologically advanced threats by analyzing behavioral signatures of both internal and external users. UEBA unlike other proactive security solutions doesn't solely rely on static rules, rather it leverages Machine Learning (ML) and sophisticated statistical tools to identify anomalies that may indicate insider threats, compromised accounts or Advanced Persistent Threats (APTs). This paper attempts to study the architecture, methodologies and practical industrial applications of UEBA, bringing out its role in enhancing threat detection and response capabilities.*

**Keywords:** Cybersecurity, UEBA, machine learning, behavioral Analytics, Insider Threats

