Decentralized Trust Verification System

Ms.Snehal Pagare[1], Kalyani Warule[2], Mrunalini Sonawane[3], Sakshi Patil[4], Harshada Pingale[5]

Hod, Department of Information Technology[1]

Students, Department of Information Technology[2,3,4,5]

Mahavir Polytechnic, Nashik, Maharashtra, India

Abstract: *In the digital era, identity verification plays a crucial role in online services such as banking, healthcare, education, and government applications. Traditional identity management systems rely on centralized authorities that store sensitive user data, making them vulnerable to data breaches, identity theft, and unauthorized access. This paper proposes a Decentralized Identity Verification System (DID) based on blockchain technology that enables secure, transparent, and usercontrolled identity management. The proposed system utilizes blockchain networks and smart contracts to store encrypted identity records, ensuring immutability and privacy. Users maintain control over their identity credentials while institutions can verify authenticity without accessing sensitive personal data. The decentralized architecture eliminates dependency on centralized authorities and enhances trust, privacy, and security in digital identity verification.*

Keywords: Blockchain, Digital Identity, Decentralized Identity (DID), Smart Contracts, Cybersecurity