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Enhancing Vehicular Security: A User-Centered Approach to Evaluating Biometric Blockchain Authentication in VANETs

Arpit Namdev[1] and Dr. Harsh Lohiya[2]
Research Scholar, Department of Computer Science Engineering[1]
Associate Professor, Department of Computer Science Engineering[2]
Sri SatyaSai University Technology and Medical Sciences, Sehore, M.P, India

Abstract: *As vehicular networks become integral components of modern transportation systems, ensuring the security of communication among vehicles is paramount. This research focuses on enhancing vehicular security through the implementation of a user-centered approach to evaluate the usability and user experience of biometric blockchain authentication in Vehicular Ad Hoc Networks (VANETs). The integration of biometrics and blockchain technology holds promise for robust and secure authentication mechanisms in dynamic vehicular environments. This study aims to assess the practicality and user acceptance of such a system, considering factors such as ease of use, efficiency, and overall user satisfaction. Through a combination of user surveys, usability testing, and real-world simulations, the research seeks to provide insights into the user-centric aspects of biometric blockchain authentication in VANETs. The findings are expected to contribute to the design and implementation of more secure and user-friendly vehicular communication systems, addressing the evolving challenges in the realm of transportation cybersecurity.*

Keywords: VANETs, Biometric Authentication, Blockchain Security, Usability Evaluation Vehicular Security

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