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(57) Abstract :
 ABSTRACT The present invention relates to a system (100) for mitigating SQL injection attacks. The system (100) includes an input validation module using context-aware parsing and semantic analysis to detect and neutralize malicious payloads, and a real-time monitoring and detection module that employs anomaly detection algorithms to identify suspicious patterns in web traffic and database interactions. A behavioral analysis engine utilizes machine learning to differentiate between legitimate and malicious queries. Blockchain integration ensures data integrity and immutability, while a zero-trust architecture enforces strict verification measures for all transactions. The system (100)'s operational workflow includes rigorous input validation, real-time anomaly detection, and immediate response mechanisms. Implemented through advanced software and robust hardware, the system (100) provides enhanced security, scalability, and compliance with industry standards. This innovative approach significantly reduces the risk of SQL injection attacks, ensuring the integrity and security of sensitive data.

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