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(57) Abstract :
The present invention discloses a computer-based system for detecting software security flaws, comprising a static analyzer (101), a dynamic execution monitor (102), a machine learning-based prediction engine (103), a risk assessment engine (104), and a dashboard interface (105). The system integrates multi-layered analysis mechanisms to identify, classify, and predict vulnerabilities across software development and runtime stages. It further provides real-time reports and corrective recommendations, ensuring robust, adaptive, and continuous security monitoring against known and zero-day threats within evolving software environments.

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