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(57) Abstract :
A system (100) and a method (200) for automated exploit generation in software systems is provided. The system (100) collects a diverse dataset comprising software code, documentation, and security reports from various sources. The system (100) also applies preprocessing techniques to remove noise, standardize formats, and extract relevant features. In the system (100), natural language processing is used to extract meaningful information from textual resources, while feature extraction extracts code snippets, function calls, variables, and contextual information. This system (100) offers advantages in terms of efficiency, accuracy, scalability, and proactive vulnerability detection in software systems. The system 100 incorporates mechanisms to generate a range of exploit variations for a given vulnerability, considering different attack vectors and techniques. This flexibility allows for the exploration of various exploit possibilities and aids in developing comprehensive security measures.

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