

## Automata-Based String Analysis for Detecting Malware in Android Programs

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**Abstract :** We design and implement a precise model of string operations using finite state machine transformers and state transformers to approximate the values string variables can take throughout the execution of the program. We use our model to analyze Android program string variables. Our experimental results show that our string analysis is very efficient at detecting the contextual effect of string operations on the string variables. Our model proved to be very useful when it came to verifying statements about the string variables of the program.

**Keywords :** abstract interpretation, android, static analysis, string analysis

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