## On the structure of data losses induced by an overflowed buffer

Andrzej Chydzinski

15 Feb 2022

### Literature Survey

* Analyzed existing studies on buffer overflows and data losses.
* Identified gaps in understanding data loss structures induced by overflows.

### Methods Used

* Analyzed data losses induced by buffer overflow.
* Proposed a model to understand data loss patterns.

### Insights

The paper explores data losses caused by an overflowed buffer, shedding light on the structure of such incidents. Buffer overflow refers to a vulnerability where data exceeds buffer capacity.

### Conclusions

* Buffer overflows lead to unpredictable data losses.
* Data losses are not always immediately noticeable.

## Static detection of real-world buffer overflow induced by loop

Peng Luo

01 Feb 2020

Literature Survey

* Literature review focuses on existing buffer overflow detection techniques.
* Discusses limitations and challenges in current static analysis tools.

### Methods Used

* Static analysis for buffer overflow detection
* Loop-induced buffer overflow detection techniques

### Insights

The paper focuses on detecting real-world buffer overflow vulnerabilities caused by loops, enhancing static analysis techniques to identify such security threats in software development.

### Conclusions

* Proposed method detects buffer overflow in loops effectively.
* Static analysis can identify real-world buffer overflow vulnerabilities.

## References

[1] A. Chydzinski and A. Chydzinski, “On the structure of data losses induced by an overflowed buffer,” *Applied Mathematics and Computation*, vol. 415, p. 126724, Feb. 2022, doi: 10.1016/J.AMC.2021.126724.

[2] P. Luo, D. Zou, Y. Du, H. Jin, C. Liu, and J. Shen, “Static detection of real-world buffer overflow induced by loop,” *Computers & Security*, vol. 89, p. 101616, Feb. 2020, doi: 10.1016/J.COSE.2019.101616.