Lehrstuhl für Sicherheit in der Informatik
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Announcement: HiWi/BA

Library API Mining

Motivation and Task Description

Software libraries provide a collection of broad functionality to be freely used. To use the functionality the library is often accompanied by documentation. Often important information on how to use (single) functions is also provided in the comments of the library header files. However, the amount, form, and content quality of the comments vary greatly.

The aim of this work is to analyze comments in library headers w.r.t. occurence, quality of information, and usability for automated library testing. Firstly, possible choices of C/C++ libraries are reviewed w.r.t. suitability for deeper analysis. The comments included in the selected libraries headers are surveyed and evaluated w.r.t. to the overall goal. Subsequently, an approach is to be developed to automatically mine the included information using existing approaches, e.g., NLP. The collected information is to be transformed into a simple structured form usable for automated library testing.

Requirements

- Ability to work independently and accurately
- Basic knowledge of C/C++
- Basic knowledge of Python

Contact

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