Software Engineering Seminar

Effective Search-Based Automated Program Repair

Description

The research field of automated program repair is currently explored using different strategies to tackle the inherent difficulties. Search-based automated program repair approaches generally struggle to generate good patches (or any patches at all), due to extremely large search spaces. For example, a recently proposed technique [2] proposes to use context information to better guide the search for patches. Another approach aims to generate more correct patches by automatically deriving contracts that the generated patches have to fulfill [1].

The student is to examine and discuss approaches that aim to make (search-based) automated repair techniques more effective in terms of both quality and quantity.

References


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