



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*. A recently proposed technique [1] proposes to use *context information* to better guide the search for patches

The student is to examine and discuss the approach given in the paper and compare it with other techniques that supposedly make (search-based) automated repair techniques more effective.

References

- [1] Ming Wen, Junjie Chen, Rongxin Wu, Dan Hao, and Shing-Chi Cheung. Context-aware patch generation for better automated program repair. In *Proceedings of the 40th International Conference on Software Engineering, ICSE '18*, pages 1–11, New York, NY, USA, 2018. ACM.

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