



Software Engineering Seminar

# Debugging with AI

## Description

Artificial intelligence is an interesting current research topic that has recently also found its way into the field of debugging. Artificial neural networks can, for example, be used for automated fault localization and program repair [1, 2].

The student shall examine and discuss the current state of the art in debugging techniques related to artificial intelligence.

## References

- [1] Rahul Gupta, Soham Pal, Aditya Kanade, and Shirish K. Shevade. Deepfix: Fixing common C language errors by deep learning. In *Proceedings of the Thirty-First AAAI Conference on Artificial Intelligence, February 4-9, 2017, San Francisco, California, USA.*, pages 1345–1351, 2017.
- [2] Wei Zheng, Desheng Hu, and Jing Wang. Fault Localization Analysis Based on Deep Neural Network. In *Mathematical Problems in Engineering, vol. 2016*, 2016.

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