TU Clausthal

Abschlussvortrag Masterarbeit Xintong Li

„Sherlock vs. Reluplex - A Case Study in Artificial Neural Network Verification"

Artificial neural networks have emerged as an important tool for developing adaptive safety-critical systems. Verifying these systems is a challenge when using traditional approaches developed for software and hardware verification.

This project investigates in two verification open-source tools, Sherlock and Reluplex, and presents a novel case study to compare the scalability of two approaches for verifying artificial neural networks. A deep neural network is created and trained based on the case study, and several properties are provided to be verified by Sherlock and Reluplex. Through comparing the scalability of the two tools by verifying DNNs, the strengths and weaknesses of the underlying verification approaches will be highlighted.

Betreuer der Arbeit: Prof. Dr. Rüdiger Ehlers, Prof. Dr. Sven Hartmann (Institut für Informatik)

Datum: Donnerstag, 14. Mai 2020, 15:00 Uhr

Ort: Online-Meeting über BBB

                Link: https://webconf.tu-clausthal.de/b/rud-p9a-w49