Online Failure Prediction in Evolving Systems

Description

Online failure prediction is an approach that aims to increase system reliability by predicting pending problems at runtime and preventing them from occurring. Traditional online failure prediction techniques collect monitoring data, such as, response time or system events, from the system in both normal and failing states. The collected data is used to construct the prediction models which can classify whether or not the system is deemed to fail. However, in evolving systems, many parts, e.g., architecture, configurations, may change over time which consequently lead to changes in system behavior. The prediction models which was created by the old dataset may become outdated and do not provide sufficiently high prediction accuracy. This seminar paper shall investigate the techniques which can be used to keep the prediction models up-to-date and maintain the quality of the prediction in the events of software evolution.

References


Contacts

Teerat Pitakrat (pitakrat@informatik.uni-stuttgart.de)
Reliable Software Systems (RSS) Group
Institute for Software Technology (ISTE)
University of Stuttgart