

Automatic Software Repair: Recent Advances and Perspectives

Orientador: Nuno Pombo (ngpombo@di.ubi.pt)

Objetivos

Aiming at to reduce software developers' workload, and time-consuming, in the last years several techniques have been extensively investigated as automated solutions for software repairing. The ultimate purpose is to provide a possible solution to an observed problem that may be validated by testers in advance it is finally accepted and/or adapted. In line with this, is timely and relevant to benchmark different models for the automation of software repair.

Tarefas a Realizar e Cronologia

T1 Introduction to software quality (2 weeks);

T2 Review the state of the art (8 weeks);

T3 Design and development (12 weeks)

T4 Testing and evaluation (8 weeks)

T5 Write the report (12 weeks)

	Feb	Mar	Apr	May	Jun
T1	X				
T2	X	X			
T3		X	X	X	
T4				X	X
T5			X	X	X

Requisitos Técnicos / Académicos

Hard skills: Proficient in Programming

Soft skills: Enthusiastic, Competitive, Dedicated, Perseverant, Creative, Logical and Critical thinking, Desire to learn.

Resultados Esperados

- Source code and documentation of all code development;
- Journal or conference paper describing the process (tentative)
- Project report.

Referências Bibliográficas

[1] Automatic Software Repair: A Survey, A. Gazzola, L., Micucci, D., & Mariani, L. in *IEEE Transactions on Software Engineering*, 2018, 1-1.
<https://doi.org/10.1109/tse.2017.2755013>