FACULDADE ENGENHARIA

Departamento de Informática

How to Predict Time to Fix Bugs?

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Objetivos

A significant amount of time is spent in investigating bug reports which challenges not only the planning, but also the costs of the software development process. Prediction models based on patterns e.g. frequency of occurrence of certain developer tasks. However, an effective, and reliable time estimation is challenging due to a myriad of factors such as the difficult to fix, the requirement for many changes in the code, among others. Thus, is timely and promising to develop novel models to predict time to fix bugs in order to provide a useful tool for managers, and software quality practitioners.

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] **On the Use of Hidden Markov Model to Predict the Time to Fix Bugs**, Habayeb, M., Murtaza, S. S., Miranskyy, A., & Bener, A. B. in *IEEE Transactions on Software Engineering*, 2018, 44(12), 1224–1244. https://doi.org/10.1109/tse.2017.2757480