

## Using Augmented Reality in Software Engineering Education

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### Objectives

Software engineering education aims to bring together theory and practice, so that the learner may develop a deep understanding on cornerstone concepts and principles, along with skills and competences to solve real-world problems. Thus, it is not merely an academic concern about teaching relevant topics, but also a responsibility to shape skilled individuals adequate for the industry demand. Moreover, since the software industry is developing rapidly and becoming transnational, several challenges are facing the qualification of software engineers, capable to develop products according to the international industrial standards into overseas markets. The increasingly adoption of technology in the classroom disrupted traditional models in terms of lecturer-learner interaction, group dynamics, content delivering, and learning experience, just to mention a few. In line with this, is timely experiments aiming at to evaluate the adoption of technology into the learning process and to measure its effectiveness. This research proposal includes the development of the following tasks: (1) research and development into the framework of the software engineering education; (2) design a case study based on the adoption of Augmented Reality (AR), (3) test and proof of concept of the developed solution(s); (4) and elaboration of scientific reports and articles and dissemination of the results in national and international scientific events.

### Keywords

Programming, software engineering, gamification.

## Workplan

The workplan encompasses complementary tasks as presented below:

- T1 - Technological background study (0.5 months);
- T2 - Requirements analysis (0.5 months);
- T3 - Design and development (1 month);
- T4 - Testing and evaluation (1 month);
- T5 - The writing of the report (1 month).

	Oct	Nov	Dec	Jan
T1	X			
T2	X			
T3		X		
T4			X	
T5				X

## Required Skills

Hard skills: Programming skills, and software engineering

Soft skills: Creative, proactive, responsible, resilient, willing to learn, and able to work in a team.

## Deliverables

In this project work the following deliverables are expected:

- A validated computational tool;
- A report describing the method and the validation results.