

Project-centered digital health tuition for engineers: Case studies

Vasile STOICU-TIVADAR

Politehnica University Timișoara, Department of Automation and Applied Informatics, Vasile Pârvan Str., no. 2, 300223 Timișoara, Romania
E-mail: vasile.stoicu-tivadar@aut.upt.ro

* Author to whom correspondence should be addressed; Tel.: +4-0723-218612

Abstract

This paper presents a point of view based on the experience of didactical activities for IT engineering students, in Politehnica University Timisoara. The introductory part briefly describes the specific of digital health projects. It is obvious that this domain is a very sensitive one, due to: the healthcare domain itself, heterogeneous applications, wide variation of requirements, clients less at developers' disposal, need to integrate software from different developers, need of interoperability, the target environment not permissive, difficult to finance etc. That is the reason why is difficult to convince future engineers to embrace a career in the field. The Materials and Method section describes the specific of our students and suggests ways to increase the motivation for the digital health. Our students, children of the new Millennium, don't focus too long, react to show, have instant access to information, they expect the solution from outside, they are self-oriented (a short study demonstrates that), often if failures occur, they search outside for responsibility. The tuition process must take into account this specific: the Academics must challenge the students with debates, gaining their respect, give them show, increase their responsibility, request them an activity as in software companies. As Case Studies, two projects are presented, for the Software Engineering lecture (bachelor), and for the Management in Digital Health Projects. These projects are complex ones, related to Wearable devices used in Healthcare, to Robots in drug supply in a hospital, to interoperable healthcare networks. All the projects are team works (7 up to 10 students), they imply diverse technologies (IoT, mobile, cloud, Web, Analytics), the team must deal with a global assessment and split the available points. Results are presented, conclusions are drawn and comments are made in correlation with the tuition objectives.

Keywords:

Medical Informatics Tuition; Project-Centered Tuition; Software Project