Stimulating and maintaining students' interest in Computer Science using the hackathon model1

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Abstract

Computer Science (CS) enrolments at higher education institutions across the globe remain low in comparison to other disciplines. The low interest in CS is often attributed to students' misconceptions about the discipline, such as CS being construed as complex, asocial, and only for computer wizards. Consequently, hackathons, which are self-organised programmes that bring together different stakeholders to collaborate in rapidly building software prototypes, are emerging as one potential solution to address some of the students' misconceptions about the CS field. Using an exploratory case study and activity theory for data analysis; this research article presents substantive research findings that posit hackathons as an approach that could stimulate and maintain students' interest in CS. The key elements of the hackathon model are collaborations, networking, mentoring, hands-on engagement in socially-relevant computing projects, and community involvement. The model was evaluated using expert reviews in terms of its relevance, impact, complexity, and sustainability