

Review of Software Engineering in the Context of Embedded and Cyber Physical Systems.(2017)

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Abstract

Embedded systems have overwhelmingly penetrated systems globally in areas such as transportation, industrial-automation, medical-equipment, communication and energy as a result of innovations being triggered by software embedded in these systems. These systems use approximately 98 percent of all the microprocessors produced worldwide. The objective of this study was to discuss the state of embedded systems use in software engineering, establish Opportunities Created by Embedded Systems and to investigate the Challenges of Embedded and Cyber-Physical Systems. This study utilized the literature review method to examine and analyze secondary sources of data such as conference reports, journal articles, and publication articles including google scholar. The paper aims at contributing towards knowledge and lessons that can be applied in towards building embedded and cyber physical systems in software engineering.

Keywords

Embedded Systems, Real-Time, Layout, Latencies, Concurrency, Petri-Nets, Cyber-Physical, Feedback Loops

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