Estimation techniques for scrum: a qualitative systematic study

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Abstract

Every competitive IT industry cannot avoid underestimating their projects' effort, cost, and time. Some scrum project is completed delayed and undergoes difficulties due to over budgeting and a lack of needed functions. Software project failures are caused by incorrect and imprecise estimation; thus, it should be taken into account. A substantial change is required when Agile-based processes (e.g., Scrum) are introduced to the industry. The analysis is still difficult with Agile since requirements are constantly changing. Projects, individuals, and resistance issues, incorrect usage of cost factors, unawareness of regression testing work, readability of software requirements size as well as its related complexities, and so forth are all causes behind the difference in anticipated and real effort. This work analysis examined several publications and prospective researchers striving to narrow the actual and estimated effort gap. Decision-Based techniques significantly outperformed non-Decision Based and conventional estimating strategies by extensive literature analysis. We found that the regression test based estimation technique should be improved for accurate estimation of effort. However, scrum still needs a significant estimation technique to resolve the over budgeting issue. This study discussed the machine learning techniques, there proficiencies for estimation and flaws. The overall effort is the sum of all sprints components' efforts, and it repeats after the prospective deliverable version.

Keywords

Agile methodology, Software development, Cost estimation techniques