SOFTWARE TESTING RESEARCH: A COMPARATIVE STUDY OF SOFTWARE TESTING TECHNIQUES, ACHIEVEMENTS, CHALLENGES.

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ABSTRACT:

Software testing research faces a collection of challenges. Testing is an essential activity in software engineering. In the simplest terms, it amounts to observing the execution of a software system to validate whether it behaves as intended and identify potential functions. Testing is widely used in industry for quality assurance: indeed, by directly scrutinizing the software in execution, it provides a realistic feedback of its behavior and as such it remains the inescapable complement to other analysis techniques. Software testing is important activity in Software Development Life Cycle. Software testing is the process of assessing the functionality and correctness of a program through execution or analysis. The testing of software is an important means of assessing the software to determine its quality. Since testing typically consumes 40-50% of development efforts, and consumes more effort for systems that require higher levels of reliability, it is a significant part of the software engineering.

Keywords: Software testing, Test plans, GUI(Graphical User Interface, Software development Life Cycle(SDLC), testing types, Research orientation Testing Limitation, waterfall model, stakeholders.

INTRODUCTION AND BACKGROUND STUDY:

The bug detection strategies analyzed in this paper are also GUI Testing/ Front End Testing and Back End Testing. They are representative of state of the art: widely used in industry and also reflects the research community's current interest in automated testing solutions. By GUI Testing we denote any testing activity whose purpose is to