INFORMATICS INSTITUTE OF TECHNOLOGY

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Generating Optimized and Prioritized Test Scenarios.

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Abstract

Software testing is a more essential stage in Software Testing Life Cycle. Testers spend more time to provide a quality product. When testing a particular functionality, first the system requirement must be analyzed and the test scenarios must be identified and then the tester will be writing test cases to each test scenarios that are identified. When this is done manually it is a time consuming work and errors might occur as human is the one who is writing. There is a solution in the market for this particular problem that is Model Based Testing. Here the tester will create a model of the system and if that is uploaded the application will automatically will generated the test scenarios. But the problem here is the tester will have to waste his/her time in creating the model so as a solution Test scenario generation using directly the system requirement was proposed.

This is the best solution for this problem, here the tester need not to wait system to be developed nor have to create a model for the system. This solution is implemented by using Multi class classification method. First the requirement will be pre-processed to remove all the noise and then the keywords will be identified using TextRank algorithm and finally it will predict the scenario using the pre-trained classification SVM model.

This particular system has gone under testing and has produced a really good results. All the testings were conducted such as functional, non-functional, integration and model test. Also this application has got many positive evaluation.

Keywords: Test Scenario Generation, NLP, ML, Multi class classification.