

The Project Part 3

CS569

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1. Introduction

I changed my idea about the algorithm for the ART because it is too hard. So for now, I changed it to the BFS, the breath first search algorithm. For the part 2 of this project, I focus on the basic of this project, as the request, I need to implement a novel test generation algorithm using the TSTL API. It should include the timeout, seed, depth, width, faults, coverage and running. So this part will finish the basic function to meet the requirement and I will improve them in the future.

2. Implementation

For this part, I first fixed the problem which will cause crash in my tester1.py, I forgot the line: `elapsed = time.time() - start`, so it made my tester1.py crashed. After that, I add the `coverage_count` which can count the coverage, for this, I also need the `leastcovered`. I also added the `mutate` test. This test will get the data from the `statebuff` and do the `mutate` test. The data in the `statebuff` is collected from the `state` loop. With this test, my branches and statements goes up to 157 and 119 from 87 and 63. This made my test better than before.

3. Future Plan

Compared with other students' results, my result getting better but still worse than other's. I will still be working on it for a better coverage and more effective.

4. Reference

Discussed with Zhou Zheng.