

# Parallel Test Case Prioritization for Distributed System Using Search Algorithms

Team 6

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## **Abstract**

TODO

## **1. Introduction**

- Regression Test Case Prioritization
- Parallel Test Prioritization
- Parallel Test Prioritization, but different CPU

## **2. Parallel Test Prioritization**

- Problem Description
- Problem Definition
- Effectiveness Measure

## **3. Algorithms**

### **3.1. Greedy Algorithms**

TODO

### **3.2. Simulated Annealing**

TODO

### **3.3. Genetic Algorithms**

TODO

## **4. Empirical Study**

### **4.1. Research Questions**

- RQ1: Which algorithm is most effective in solving the parallel test prioritization problem?

- RQ2: How do the number of computing resources and the relative performance between them influence the performance of the parallel test prioritization techniques?

## 4.2. Experimental Design

N=1 N=2, 1:1 N=3, 1:2:3 N=8, 1:1:1:1:4:4:4:4

## 4.3. Subjects

TODO: Seyoung

## 4.4. Results and Analysis

TODO

## 5. Conclusion

- Discussion
  - Comparison With Sequential Test Prioritization
  - Practical Concerns
  - Generalizability
- Comments from Professor
  - How long should the entire test take for there to be real gains in prioritization?
  - The time gain from prioritization becomes smaller as the number of compute resources increases, so it may not be meaningful if you already have a lot of compute resources.

## References

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