CS227: Reasoning Methods in AI
Assignment 3 Feedback for:

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June 4, 2008

I　Overview

Project 3 was designed to introduce you to job shop scheduling algorithms and heuristics. Every group presented working job shop schedulers, and one added a dependency-directed backtracking implementation too! Many groups were able to utilize their code from the second project. The reports were well thought out and we were pleased with all the hard work you put into the analysis of this problem domain.

Section II provides general feedback and observations for all assignments. Section III provides specific feedback for your group.

II　General Feedback and Observations

1　Problem Analysis

Some problems were substantially harder than others and we would have liked to have seen a more detailed analysis of how different algorithms performed on the more difficult problems. Such an analysis would have been an effective way to enhance the depth your understanding the algorithms and problems explored for this assignment.

2　Communicating Results

A good analysis hinges on an effective presentation of your experimental results. A number of groups provided only a limited set of results, or presented all of the collected data in one giant table. Though providing such a table as an appendix is appreciated, the main body of your analysis will be most effective if it selectively presents the most interesting data in focused tables and graphs.

3　Random Restarts

When runtime variance is non-trivial, random restarts is one good approach for reducing variance and substantially improving average-case performance. Not many groups, however,

used this approach. In the future, it may be beneficial to at least consider it when solving these sorts of problems.

III   Feedback for the Robertson-Sullivan-Vantimitta Group

1   The Good

- **Good Analysis and Adaptation**. Your analysis and presentation of variable ordering, variance, and random restarts was strong. These analyses really set your paper apart from the rest. Good work!

- **Performance Tuning**. As usual, you have done a great job engineering the implementation.

2   Areas for Improvement

- **More slack Tweaking**. It may have been interesting to analyze `slack` parameters.

- **Approach**. Not all of your enhancements were well-motivated - try to systematically target your enhancements to address particular problems.

3   Late Days

Please see Table 1 for information about the number of late days you have used and remaining.

Assignment	Number of Late Days
Boolean Satisfiability	0
Constraint Satisfaction	2
Job Shop Scheduling	2
Remaining	3

Table 1: Late Day Statistics.

4   Grade

Your letter grade on this assignment: *A*