CS 820 Project Proposal

University Timetabling using Multi-Objective Optimization

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Abstract

The aim of this project is to do a study on how university time table scheduling can be optimized using Multi-objective optimization. The key issue with scheduling time tables for a university is scalability in terms of number of students and subjects. As the number of students in a course increases in a new term there comes a need to increase the number of instances of that particular class without creating a conflict in scheduling other classes and some of those courses have requirement of completion of lab work as well which adds to the complexity of having to schedule lab hours too. Also the complexity of the problem increases when the duration of the classes are variable as typically labs are scheduled for far longer than lectures and also the mandatory constraints are different for labs and lectures. The optimal approach to tackle this issue of scheduling by optimizing multiple objectives is by using Evolutionary algorithms.

Keywords: University Timetabling, multi-objective optimization, Evolutionary Algorithms

References

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