INFORMATICS INSTITUTE OF TECHNOLOGY

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Automated timetable scheduling system

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Abstract

Constructing a schedule for each and every tasks to be performed for a particular day is encountered in real life situations. Scheduling a task may present in many performs such as personnel scheduling, production scheduling, education scheduling etc. Among them scheduling an education timetable is a difficult task among others due to the problem of satisfying several constraints that are needed to be considered in order to arrive at an attainable solution. Further constructing a timetable for a university is persevering and complicated task when there are large number of course arrays and limited resources. The problem of timetabling is usually described as as a highly constrained NP hard problem. Thus, evolutionary techniques have been used to solve this timetable scheduling issue, techniques of Genetic algorithms and evolutionary algorithms etc have been used as a mixed combination. This project focus on developing a practical algorithm used in automated timetabling system for universities. Whereas the developed timetabling system will create a conflict free timetable for both lecturer and the students. Meanwhile this system is able to allocate the sessions in convenient timings. Further this automated timetabling system is embedded with several features. Hence this is basically a constraint satisfaction problem, this project is capable of handling both soft and hard constraints. In brief, this project produce course timetables that fulfills the expectations of both student and the lecturer of a university.

Key words – Machine Learning, Scheduling, Real-time Shedulability