

Intelligent System for Advising

Saradha Anapalli, Sam Karrah, and Gopal Gupta

When a student approaches his graduate advisor for advice, the Graduate Advisors need to look at different data sheets, possible course listings and also about the various details pertaining to the student before advising. An advisor looks at the “ENTRY” and “EXIT” factors of the student from the “data profile sheets” of the student and prepares a “Degree Plan” for him manually. Further, the advisor sees the course listings, courses offered that particular semester, courses taken in the previous semesters by the student, and the prerequisites list to confirm if a student can register for a particular course. He also helps a student to transfer his credits from a different university, if possible. We are developing an advising system for the Computer Science Department in The University of Texas at Dallas.

Our proposed system takes in the Social Security Number (SSN) or the Student Identification Number and creates a customized degree plan for the student after analyzing the student information database. It lists the courses which the student can take in the coming semester, and all possible dates for his graduation. The system makes the decision based on the prerequisites for a particular course, track of the student and the courses taken by the student in the previous semesters. This system works for students in all the tracks in Computer Science Program including Fast Track.

Each Track has a list of core courses and electives. This system sees to that not many core courses are taken in a single semester. It also considers the student’s interest in giving out the list of preferred courses for the current/coming semester. The advisor can ask the student to fill in his interests while building his degree plan using this system. The system gives a set of preferred courses for the current semester and also the coming semesters. It can give a complete degree plan for a student based on his track and his interested fields.

The development and testing of the tool is currently in progress. Current work includes developing the front end using Java Swing, and a prototype model of the actual Back End, using Constraint Logic Programming using Sicstus Prolog. The Backend writes the output to a file from which the Front-end gets its data. The Front-end gives out a form which is in a tabular format and the advisor can modify data in it. He can add or delete courses from the student Course listing for that particular semester.

Reference: Saradha Anapalli and Gopal Gupta, “Intelligent System for Advising”, UTD Computer Science Department technical report (forthcoming).