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CSCI4801 – Dr. Joseph

“Final Project” Proposal 1

For my final project (using that term loosely here), I would like to create an agent for calculating the best degree plan giving any given situation. I want to use a MySQL database to handle the list of classes, pre-requisites, instructors, classrooms, times, etc, as well as the requirements for several different degrees. I will start with focusing on ASCS and BSCS degrees taking only traditional classes to set up the framework of the agent, but then my next step will be to add several options/features to make this a very powerful tool. My goal is to eventually create something that the school can even integrate into the website or at least have on the admin network to assist advisors in performing their job better.

Here is a list of features that I want to begin with:

* All classes set up in a well defined data structure for the computer science degree plan (assuming free electives are chosen from CSCI)
* The degree requirements for the CS degrees as a set of rules in a database
* A interface to select options against which for calculating paths
* A table of axioms: prerequisites, non-traditional credit limits, min GPA requirements, etc.

And a list of features that I will add later:

* All classes offered by HPU, including the option to create a custom class (for cases like a someone wants to check against how you may or may not offer Advanced AI next term)
* A way to update a student’s classes automatically through an interface with Sunguard, instead of saving students’ academic information in the database to curtail redundancy problems
* The degree requirements for all degrees.
* Include the requirements for all minor/major combinations.
* An interface to easily change certain information based on usage rights. (I.E. deans can change class info and schedules, while advisors can not)
* An interface for the user to select any of the different options for obtaining a degree. Example: a check box to include maxing out CLEP/AP credits, a check box to include not taking MATH classes in the same term as WRI classes, etc.
* Translate the interface into a NLP discussion.