Automating AlgoBOWL

Client: Dinesh Mehta, EECS Department
Location: Flexible/On Campus
Team Size: 4 students

Introduction

The purpose of this project is to develop an interactive web-based solution for two pieces of the client's Algorithms class:
1. Group Formation: the client currently uses an "algorithm" to form groups for course projects that loosely simulates the hiring process. This process consists of the following steps (1) Hiring manager selection. (2) Team selection from employee pool. (3) Team assignment to hiring manager (resulting in groups of three).
2. AlgoBOWL: AlgoBOWL is an end-of-semester head-to-head competition in which groups strive to develop an algorithm that computes the best solutions to an NP-hard optimization problem. The system will need to support the following aspects of the competition workflow: (1) input file submission. (2) output file submission. (3) output validation. (4) team ranking computation. (5) dynamic visualization of rankings.

Skills/Interest

The ideal team will include at least one student who has taken Algorithms with Prof Mehta. There is existing code for pieces of the project that teams could use (or not) at their discretion. This project will integrate with the current CS-CONNECT system.

Why This Project?

1. Possible technical paper at the end.
2. Work will be used by your fellow students.
3. Opportunities for the creative visualization of results.