Student Admission Model and Simulation

Type: Type 1
Xueting Liao, Huafu Hu

CSC 8350: Advanced Software Engineering
Department of Computer Science, Georgia State University
Spring, 2018

Problem Statement (or Background):
With the improvement of education level for society, more and more people prefer to acquire higher education degree to achieve both self-improvement and job compatibility. This situation leads to an increase of application for graduate department. On the University side, they prefer to select best candidate for their university to build higher reputation. To make better decision for University, we propose a model that allows us to model more adequately the dependence among the application, admission, and enrollment decisions by the development of an integrated model of student choice. In this model, we simultaneously estimate application, admission behavior, and we control for the non-random assignment for sending out an admission or an offer to students. The University admission model is proposed to provide understanding of the admission system and serve as a heuristic guide. This model consists of (1) the applicant pool; (2) criteria for selection; (3) the admission committee; (4) selection processes and policies; and (5) outcomes. Each of these dimensions and the interrelationships among the dimensions are described. We will take an example of Georgia State University Computer Science department and want to simulate the whole process.

Modeling and simulation goals (for Type 1).
The goal of the project is to help both university and student make better choice based on materials collected. We aim to build a student admission model with application, admission and enrollment processes. It is initiated as the students submit their application to university with their materials. Different initial standard could select different number of applicants. The more complex of the criteria for student selection, the wiser decision will be made by professors. Terminated as the final offer decision being made. And the decisions in turn regulate or promote other application decision making for other students. The sequential chart is showed as below:
References (Optional)

1. MOR: a simulation-based assessment centre for evaluating the personal and interpersonal qualities of medical school candidates
2. An Admission Model for Medical Schools, Edwards, Janine C. PhD; Elam, Carol L. EdD; Wagoner, Norma E. PhD