Applications Quest Research Study

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(I) Landmark Cases
   (a) Grutter v. Bollinger
   (b) Grutz v. Bollinger
   (c) Regents of the University of California v. Bakke

(II) Students filed suits alleging that admissions discriminated against them on basis of race
   (a) reserved seating
   (b) points awarded based on race

(III) Supreme Court ruled in favor of using race in the admissions decision, but not the only factor
   (a) Most schools are in agreement with court ruling
   (b) Unclear procedure to achieve diversity
(I) What is a holistic evaluation?
   (a) involves all the variables on an admissions applications such that no single variable is the sole determinant of the admissions decision

(II) Admissions committee
   (a) multiple members evaluate the same applications several times and committee agrees on admittance
   (b) Question: Are the results reproducible and independent of the selection committee?
   (c) less science involved and more subjectivity
(I) Developed by Dr. Juan Gilbert
   (a) Summer 2003: The Idea
   (b) Spring 2004: AQ Version 1.0
   (c) Fall 2005: Pilot Studies
   (d) Fall 2006: AQ Version 2.0
   (e) Summer 2007: Applications Quest LLC formed

(II) Data mining software tool that clusters applications based on holistic comparisons

(III) Uses clustering algorithm to automatically compare applications to each other

(IV) Places applications into groups based upon a holistic review of their similarities
   (a) similar applications appear within the same cluster
   (b) clusters represent diverse applicants
Software Functionality

(I) Uses attribute-values on applications to determine similarities
   (a) GPA, GRE, GMAT, Essays, Race/Ethnicity, City, State, Citizenship, Gender, Major, Degree
   (b) the more attributes in common, the more similar

(II) Two types of attributes
   (a) Numeric attributes: GPA, GRE, GMAT, etc.
   (b) Nominal attributes: race, ethnicity, etc.

(III) Cluster formations
   (a) Assume all points belong to one cluster
   (b) At each step select the most different points
   (c) Split the clusters around the two points
   (d) Eventually each point is a cluster
   (e) Process stops when pre-specified number of clusters is reached
Study

(I) Importance of study
   (a) test efficiency and robustness
   (b) find any drawbacks to using application

(II) Project Question and Hypothesis
   (a) ”Are students able to increase their chances of being admitted by lying on their application in an effort to game the system when they know the demographics of the applicant pool?”
   (b) Student will not be able to game the system
Study

(1) Approach

(a) Take existing 2,500 applications and mix new applications from research participants
(b) Have participants fill two applications
(c) Process both applications in AQ software
(d) Comparatively analyze the results
(e) See if chances of the applications were improved
Progress

(I) Institutional Review Board (IRB) proposal completed
(II) National Institute of Health Certification
(III) Designed and Implemented research study website
(IV) Missing Components
   (a) IRB approval
Conclusion and Summary

(I) Applications Quest growing in popularity and recognition

(II) Allows for applications to be truly holistically reviewed

(III) Research study would have significant results
    (a) emergence of an objective, explainable, measurable and reproducible way of selecting candidates for admissions
    (b) build credibility of AQ software
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