A Web Application for Instructors to Create Maximally Diverse Student Groups
Utilizing Integer Linear Programming and Modern Web Frameworks
(Technical Report)

Advocates and Media Giants: Representation in the U.S. Film and Television
Industry
(STS Research Paper)

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by

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Preface

Efforts to improve diversity and equity require sociotechnical innovation.

Instructors in higher education often organize students into groups. Randomly or haphazardly formed groups tend to be relatively homogeneous in terms of gender, race, and other identifiable traits. Instructors seeking more diverse groups can counteract this tendency to a degree, but a tool can help. A web application is proposed that applies students' survey responses to enable instructors to form student groups that are reliably diverse according to instructor-specified criteria. The chosen web frameworks and a computationally efficient integer linear programming group assignment algorithm now support a web application that instructors can access and that optimizes group diversity by instructor-specified criteria. Though designed for instructors in higher education, the application can be adapted for use in others settings, such as in primary or secondary schools, or in workplaces.

In the United States since 2010, how have diversity advocates in film and television worked to increase representation of underrepresented groups? Participants include studios, producers, distributors, and the trade associations that represent them; organized professional actors, social equity advocacies, and some viewers. Together, the commercial success of some diverse films and shows, plus growing public demand for diversity in entertainment, constitute internal and external pressures that have improved the representation of historically underrepresented groups in media. Because the improvements have been uneven, however, advocacy continues.