2nd Annual Ohio State Student Data Visualization Challenge

Overview

The OSU Visualization Hub is launching its 2nd annual team-based Data Visualization Challenge to encourage interdisciplinary solution discovery among students, with an associated goal of simultaneously benefiting the university and community it serves.

1st, 2nd and 3rd place teams will be awarded prizes by our sponsoring organizations. These groups and those earning honorable mentions will also have the opportunity to showcase their work in a gallery setting. Submission requirements, judging criteria and deadlines are described below.

Challenge

The Ohio Association of Foodbanks provides a range of vital services to those who need them most. Their mission is to assist Ohio's 12 Feeding America foodbanks in providing food and other resources to people in need and to pursue areas of common interest for the benefit of people in need (www.ohiofoodbanks.org). The documentation of these services, and the demographics of the constituencies they have supported over the years, represent a large and rich dataset whose characteristics make the task of analysis and presentation difficult.

In an effort to better understand the patterns of community need as a way of better dispersing their resources, the Ohio Association of Foodbanks is seeking ideas for, and development of, visual rendering of this and related data. Through such artifacts the organization hopes in particular to gain further insight into questions such as the following: How have age and income demographics changed in reflection to industry investment in Ohio counties? How has household composition changed (e.g. the percentage of those with children, the presence of mixed generation families, etc.) over recent years, and how is that impacting overall need? How do food stamp availabilities and food security rates correlate to medical costs for individuals in specific populations?

A well-developed set of data visualizations can make it easier for public, researchers and policymakers to understand the data. Students participating in the Challenge will be provided with a few examples of the type of issues that could be explored and explained through data visualization in order to guide policymaking and public understanding at the initial organization meeting for teams. In this manner students can avoid reinventing the wheel, while using such existing examples as a launching pad for development. They will also be given access to background materials on the cause as well as basic guidelines for strong visuals.

Mesh Team Structure

Participants will be permitted to register as teams of 3, or as individual students (seeking teams). In the latter case, individual students will be assigned to teams by the event organizers in an attempt to ensure the greatest level of interdisciplinary mix possible (as an example, a team might consist of a Design major, Public Policy major and a Systems Engineering major). Self-formed teams must demonstrate the same principle, with each team represented by majors in at least 2 separate colleges at OSU.

To further ensure comparable team strengths participants will also be permitted to provide preferences for each of three roles:

1. *Scanner*: A team member focusing on the visual examination of data for outliers and anomalies in data integrity that must be corrected for before further consideration. Some ability to clean, parse, transform, filter and aggregate data is a plus.

2. *Explorer*: A team member focusing on exploratory data visualization in the attempt to discern relationship in the data. Skills valued include familiarity with a variety of visualization tools and techniques. An understanding of the pitfalls of data misrepresentation is a plus.
3. *Assembler*: A team member focusing on piecing together visual evidence with the aim of making sense of the data as a whole and drawing conclusions/recommendations. Logic and analytical skills, as well as systems thinking and communication skills a plus.

Student Application

Individual students (not on self-formed teams) interested in competing should submit a 1-2 page resume and a ranking of their role preferences to the event coordinators (bendoly.2@osu.edu). This will serve as the official mechanism for student application for involvement in the competition. In the case of student self-formed teams, a single email submission containing all 3 student resumes is expected.

Applications for participation are due by 5pm EST on Friday, January 15th.
Final decisions regarding participation and team structure will be announced January 19th.

Eligible Student Participants

Specifications for eligibility in participation may vary per year. The intent of this 2nd competition year is to focus on recruiting students enrolled in the undergraduate program.

Rubric for Design / Judging

The final solutions will be judged by a faculty panel, a panel of context experts and a broader vote from the professional social networking community. The following criteria should guide visualization solutions and will be the foundation of judging:

Validity - does the presentation…
> … Demonstrate an understanding of the limitations of the data?
> … Convince the viewer of rigor used in examination?
> … Convey an accurate interpretation of aspects of the data?

Efficiency - does the presentation…
> … Provide clarity in depiction?
> … Leverage concise descriptions?
> … Deliver the information clearly?

Completeness - does the presentation…
> … Provide a holistic assessment of the data?
> … Show a relevant appreciation of interdependencies?
> … Adapt a level of complexity appropriate to interpretation and application?

Novelty - does the presentation…
> … Suggest a previously uninvestigated relationship?
> … Present a creative approach to visualization?
> … Provide any new insights?

Practicality - does the presentation…
> … Suggest feasible actionable prescriptions?
> … Suggest the difficulty of / barriers to ostensible action that might be taken?
> … Suggest a clear connection between its exploration and practical use?

Team Challenge Submissions

Final submissions of team solutions are due by 5pm EST on Monday, March 7th. Submission must be posted on-line with links to the artifacts sent to the Challenge coordinator (bendoly.2@osu.edu). The submissions may be dynamic and presented via screen/online and should not exceed 24"x 36" inches in dimensions for print (either landscape or portrait).   Special instructions on reading / use should be incorporated in submissions. No secondary support documents will be permitted. **Winners will be announced on March 11th.**

Faculty Organizers and Contacts

Dr. Elliot Bendoly, Professor of Management Sciences, Fisher College of Business bendoly.2@osu.edu
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OSU Visualization Resource Site   www.visualizationhub.com