

## Mini-Challenge 2

### Background

Oceanus has enjoyed a relatively simple, fishing-based economy for decades. However, in recent times tourism has greatly expanded and resulted in significant changes. The local government set up an oversight board - Commission on Overseeing the Economic Future of Oceanus (COOTEFOO) - to monitor the current economy and advise how to prepare for the future. It is an appointed board that has no direct power on rules/spending BUT has a lot of clout in the civil service and gets government money to do its job...ostensibly in an unbiased way.

Recently COOTEFOO was hit by a sequence of scandals that roughly break down into two camps:

- Fishing Is Living and Heritage (FILAH) accuses the board of being biased toward the new tourism economy and inappropriately attending to the potential in those ventures, ignoring the historical powerhouse of the economy: Getting lots of fish out of the water and off to hungry people. They accuse some COOTEFOO members of bias against fishing.
- Tourism Raises OceanUs Together (TROUT) accuses the board of being biased toward an entrenched interest and constantly "appeasing" the fishing industry, ignoring the new/growing avenues for economic stability. They accuse some members of ignoring the brave-new-world and living in the past.

A journalist, Edwina Darling Moray (E.D. to her friends), at the Haacklee Herald is working on a story about government accountability. She has acquired the datasets that TROUT and FILAH are working from, which includes meeting minutes and travel records of COOTEFOO members. She also has acquired additional records that TROUT and FILAH did not. Moray has employed a staff programmer to massage the data into a consistent format for analysis - a knowledge graph. You are picking up the work from that programmer to design visualizations to support Moray's understanding of what is going on. Moray is not a knowledge graph expert, but she understands the workings of Oceanus well. She wants you to design a visual interface to explore the accusations in context and discern which are founded and which are spurious.

### Tasks and Questions:

- Based on the datasets that TROUT & FILAH have provided, use visual analytics to determine if each group's accusations are supported by their own record set. In other words, develop a visualization to highlight bias (if present) in TROUT & FILAH's datasets. Is there evidence of bias in the COOTEFOO member actions in either dataset?
- As a journalist, Ms. Moray would like a more complete picture of the COOTEFOO's actions and activities. She has arranged to combine the data provided by TROUT and FILAH into a single knowledge graph along with additional records. Design visual analytics approaches for this combined knowledge graph to see how members of COOTEFOO spend their time. Is the committee as a whole biased? Provide visual evidence for your conclusions.
- The TROUT and FILAH datasets are incomplete. Use your visualizations to compare and contrast conclusions drawn from the TROUT and FILAH datasets separately with behaviors in the whole dataset. Are the accusations of TROUT strengthened, weakened or unchanged when taken in context of the whole dataset?
- Design a visualization that allows Ms. Moray to pick a person and highlight the differences in that person's behavior as illustrated through the different datasets. Focus on the contrast in the story each dataset tells.
  - Pick at least one COOTEFOO member accused by TROUT. Illustrate how your understanding of their activities changed when using the more complete dataset.
  - What are the key pieces of evidence missing from the original TROUT data that most influenced the change in judgement.
  - Whose behaviors are most impacted by sampling bias when looking at the FILAH dataset in context of the other data?
  - Illustrate the bias of the FILAH data in the context of the whole dataset.

#### Reflection Questions

- Given the task to develop visualizations for knowledge graphs, did you find that the challenge pushed you to develop new techniques for visual representation?
- Did you participate in last year's challenge? If so, did your experience last year help prepare you for this year's challenge?
- What was the most difficult part of working on this year's data and what could have made it more accessible?

**Note:** Please include a reasonable number of images, graphics, or figures with your responses to each question and keep your textual response brief.

### Download the Submission Form and Data

Enter your email address in the box below to download the data and submission form for Mini-Challenge 2. This address will be used if the conference organizers need to contact you regarding any corrections to the mini-challenge.

laujjay91@gmail.com [Switch accounts](#)



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