Interactive, web-based visualization of scientific collaboration networks

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Mentors:

- Eric Kolaczyk (Hariri Institute, Director)
- Arezoo Sadeghi (SAIL)
- Margot Menestrot from Red Hat UX team
- Joe Farmer (BU Office of Research, Program Manager & Data Analyst)
- Jonathan Chamberlin

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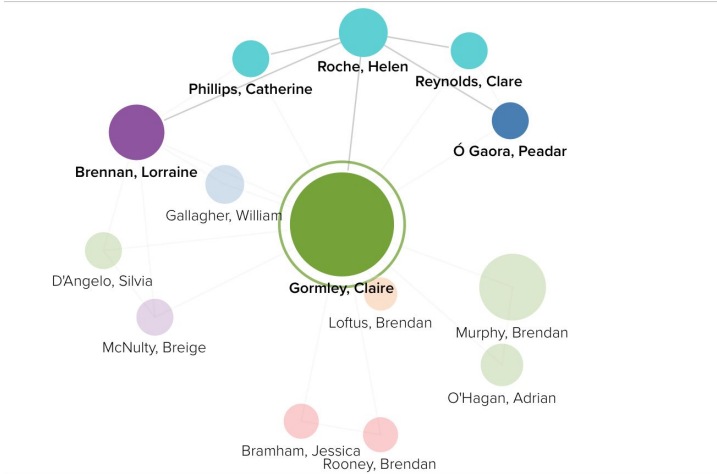
Demo 2 Feedback

- Working with mentors to discuss how to integrate app into WordPress
- Build database OpenShift to use the postgres containers and readily packaged solutions
- Potentially work with CI/CD team to use some of their tools to streamline build



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SciVal publications & Mapping Science

- Potential concern: Partial Sampling
  - Databases may not contain all journals published in all disciplines
  - Many Computer Science publications are excluded from citation databases
- Authors of publications as units
- Network edges:
  - Let i and j be two authors
  - Let A_i and A_j represent their set of publications
  - An edge between i and j (i.e., i ~ j) iff intersection(A_i, A_j) is not empty
- Highly linked vertices located closer to the center

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Current Obstacles

- Connecting to the OpenShift container to use the Postgres database
  - Discussing with CI/CD group
- Using the persistent storage in OpenShift if our pod goes down
- How to build within WordPress
  - D3.js has methods to call API but needs more testing

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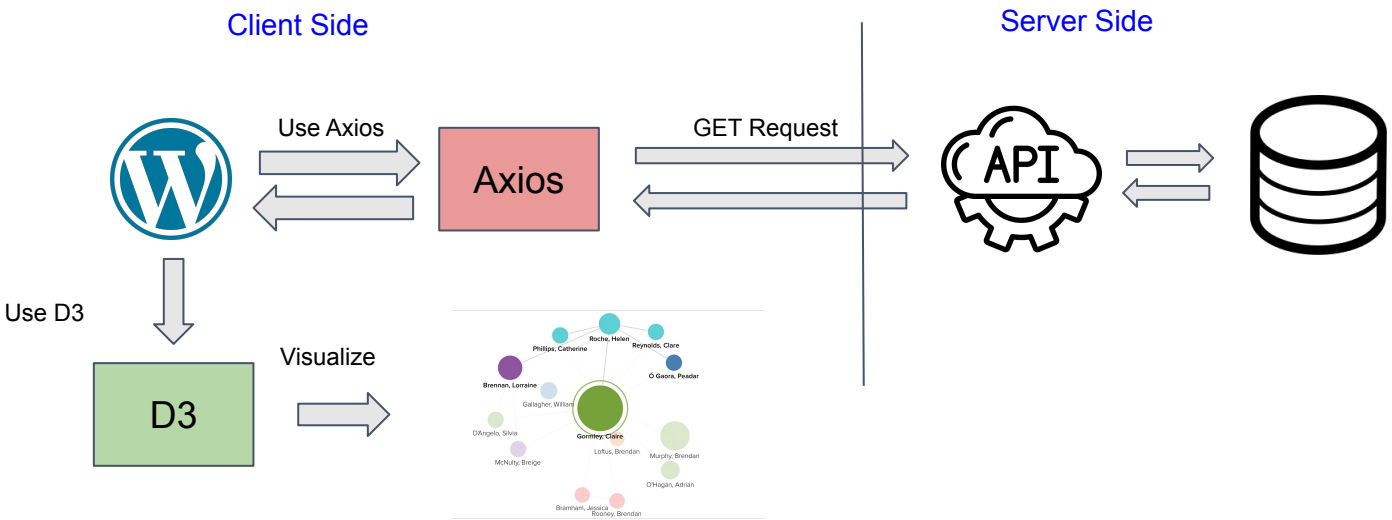
Axios

- Promise-based HTTP client
- Can send HTTP requests to interact with APIs



Sprint 3 User Stories, Objectives and Progress

User

- See (sample) data that is from the current affiliates list in a web page served from the database
- Work towards using that in a visualization

Developer

- Understand more clearly how we can integrate what we're creating into BU's WordPress environment
- Create a simple "drag-and-drop" flow so that admins of the page can simply upload a CSV to the site and the rest will be handled by the application

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Demo

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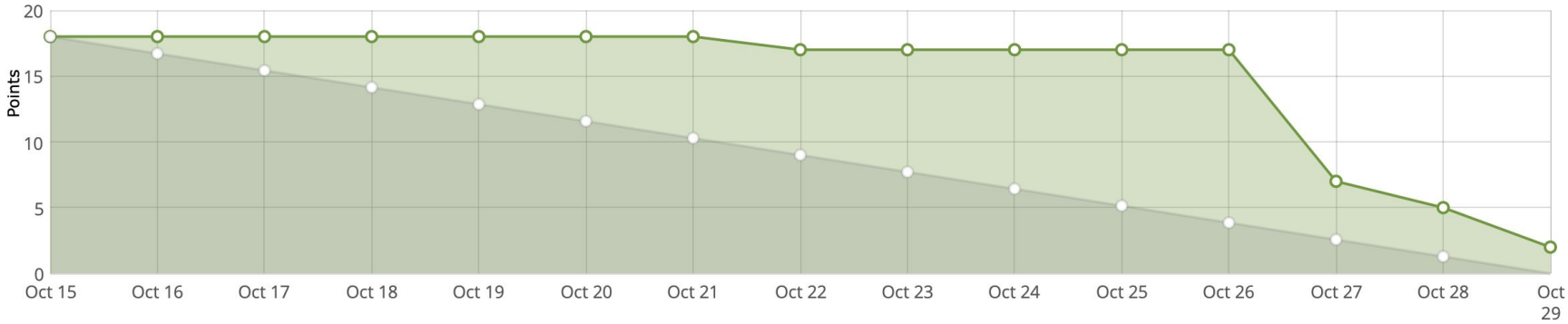
Taiga Burndown Chart



- Achieved most goals set for Sprint 3
- Work to space out tasks better for Sprint 4

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Going Forward/Next Steps

Sprint 4:

- Imbed the visualization into WordPress
- Implement analysis from SciVal into the network to show meaningful connections between nodes (researchers)
- Continue to update project management with more concise user stories and specific tasks

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Thank you!
Questions?

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