

**BIOMEDICAL BIG DATA
HACKING FOR CIVIC
HEALTH AWARENESS**

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BACKGROUND

In 2016, Purdue University Libraries launched the Biomedical Big Data Hacking for Civic Health Awareness Project to

- teach research data management practices and health data literacy competencies that support the analysis of big biomedical data
- encourage participants to develop solutions to real world health and wellness problems
- promote a hackathon culture welcoming to practitioners new to data science and computing

OUTCOMES

Across its **3** years of offering data and innovation challenges,

28% of the project's registrants have been health sciences students or health practitioners

38% have been women

46% have been members of a racial minority group

NEXT STEPS

As this project continues, we would like to develop a Libraries (ILS) course that combines critical data studies with critical health literacy.

We envision that students will use biomedical data to tackle a specific health challenge, similar to a semester-long hackathon or innovation challenge.

NEXT STEPS

As they work with the dataset, we will lead them through an exploration of such issues as:

- Who collected the data?
- Where did the data come from?
- What challenges are associated with combining, formatting, storing, and analyzing big biomedical data from different systems?
- Who controls and owns the data?
- What privacy concerns need to be addressed?

NEXT STEPS

The course could include the provision of datasets that support discussions around themes such as:

- Algorithmic and Cognitive biases*
- Informed refusal
- Social justice (as a general topic)

[*https://www.wired.com/story/the-real-reason-tech-struggles-with-algorithmic-bias/](https://www.wired.com/story/the-real-reason-tech-struggles-with-algorithmic-bias/)

QUESTIONS FOR AUDIENCE

- Are there existing resources that would support this type of work—i.e. bespoke datasets intended to support critical data studies analysis?
- Is anyone already doing something similar?
- Any project-specific or general advice?