Actually, Data Science CAN Be Accessible: Barriers to inclusion of people with disabilities in the data science workforce pipeline and ideas for lowering them
By Andrew Osborne Hasley
Module Description:
If you were designing a course or employee training that introduces participants to writing and executing code, statistical analyses, and data visualization, would you do to make it inclusive of participants with disabilities? What sorts of accessibility issues might you anticipate? How might you address them better? Why even know who the participants are? Why shouldn’t you just wait until you have a participant with a disability and work with them directly to make accommodations? Confidently answering such questions can be daunting. It requires knowing what disability is, awareness of some barriers to participating in data science by people with disabilities, some knowledge of tools and strategies for lowering those barriers, and above all, creativity. In this talk, address each of these, drawing on personal experience as a student and professional with a severe visual impairment, and knowledge gained from colleagues and friends during ongoing efforts in the area of accessible teaching in quantitative biology. Audience members will leave this talk with a better understanding of barriers to recruitment and training of people with disabilities in data science and some tools and strategies to lower them. They will also learn about areas requiring more attention. My primary goal is to leave audience members with the confidence that they can indeed help address the substantial underrepresentation of people with disabilities in this vital, growing field.

Teaching Setting:
The ideas presented here for lowering barriers for individuals with disabilities apply across all levels, from K-12 to undergraduate and beyond.

Citation:
Hasley, A. O. (2019). *Actually, Data Science CAN Be Accessible: Barriers to inclusion of people with disabilities in the data science workforce pipeline and ideas for lowering them.* EDSIN: Environmental Data Science Inclusion Network, QUBES Educational Resources. doi:10.25334/Q4NX6T
Related Materials and Opportunities:

This resource is a presentation from a conference that was hosted recently by the Environmental Data Science Inclusion Network (EDSIN). The goal of EDSIN is to strengthen initiatives across existing alliances and organizations to recruit and retain individuals from underrepresented groups in data science careers. The conference brought together researchers, project leaders for STEM programs, evaluators, educators, employers and other interested parties to exchange ideas and lessons learned. In an effort to make their conference widely accessible, presentation materials are shared on QUBESHub. Check out some of the other presentations, all with a special focus on equity, diversity, accessibility, and inclusivity:

- Students of Color Identify Ways Environmental Faculty Can Advance Racial/Ethnic Diversity in Undergraduate Programs
- Mentoring Pacific Island Students for Conservation
- Expanding the pipeline: Engaging urban secondary school and college students in science and the environment
- UW Data Science for Social Good program
- Summary of the National Academies Report on Data Science for Undergraduates

Recordings of the live presentations from EDSIN - with closed captioning - also be posted shortly. Join the EDSIN group on QUBES to receive an announcement when the recordings are made available or stay tuned to the QUBES blog for this announcement and others from QUBES partners.

*If you adopt and adapt this module, you are highly encouraged to share yo*
adaptation back with the QUBES community using the QUBES Resources System for sharing Open Education Resources.

QUBES is a community of math and biology educators who share resources and methods for preparing students to use quantitative approaches to tackle real, complex, biological problems.

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P.O. Box 126, Boyds, MD 20841
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