RESEARCH DATA FOUNDATIONS - MICRO-CREDENTIAL

As data-based research becomes a common practice, skills in data management, data analysis and computational thinking are increasingly important for applied researchers. The Graduate Student Research Data Bootcamp will provide incoming and continuing graduate students with a gentle introduction to data and programming-related research tools that will increase their access to cutting-edge methods as they begin their programs and research. Topics covered include reproducible research (especially using containerization tools such as Docker); collaboration and version control (using Git and Github); data analysis and visualization fundamentals in Python and R; and an overview of publishing platforms, impact and scholarly communication. The micro-credential will document and credential students' basic knowledge and competence in these topics. ensure that the required tasks specified by the instructors have been completed according to specifications.

Skills

- Containerization
- Data Analysis
- Data Ethics
- Open Access
- Open Data
- Programming
- Python
- R
- Scholarly Publishing
- Version Control
- Visualization

Eligibility

- CU Boulder Students (including nondegree/ACCESS)
- CU Boulder Employees
- Other

Delivery Mode

Online

Credit Status

Noncredit

Academic Level

Graduate

Time to Completion

Weeks

Fee

Yes

Requirements

Students must register for the Graduate Student Research Data Foundations and attend the entire three-day workshop. Then they must complete a series of data and code-related assessments and projects demonstrating their facility with basic computational tools and techniques and compile a public portfolio of these projects and assessments on GitHub (an online code-sharing platform).

Criteria

The micro-credential will invite students to demonstrate their familiarity with the research data lifecycle (https://www.colorado.edu/crdds/ what-we-do/research-lifecycle (https://www.colorado.edu/crdds/whatwe-do/research-lifecycle/)) using a series of skills and project-based assessments. In particular, learners must complete instructor-assigned projects, and push these projects to a dedicated Github repository, which will serve as a portfolio of bootcamp-specific assignments and projects. The Bootcamp organizers will review and evaluate these portfolios and