

Data Science for Public Service Consortium

Summary: The Data Science for Public Service Consortium (DS4PS) aims to deepen institutional capacity in schools of public affairs in the technical skills and ethical foundations needed to effectively harness the promise of data science in the public and nonprofit sectors. Building on existing data science curriculum in schools of public affairs, the project aims to formalize a consortium to increase the teaching of data science skill sets and scale the number of students who are prepared for data science careers in the public and nonprofit sectors.

Purpose: The DS4PS Consortium aims to leverage open-source content for a core data science curriculum, structure cross-enrollment opportunities for specialized electives at member institutions, and create a community of faculty focused on curricular innovations that make data science accessible to public affairs students.

Need: Schools of public affairs are positioning their graduates for careers that use and steward data for public problems and to address data governance issues in society. At least 16 schools of public affairs offer degrees or concentrations in data science or civic analytics; however, the number of graduates from these programs cannot meet demand for data science knowledge/skills in the public sector. In addition, over half of these schools are private and inaccessible financially to students who will enter public service at the state and local level.

Value: Data science courses shared through a consortium of schools of public affairs can:

- **Infuse public sector knowledge and values into data science:** Existing data science programs have engineers, computer scientists, and statisticians as their primary audience and focus on advanced big data or machine learning skills valued by Fortune 500 firms. This emphasis results in curricula that are inaccessible or irrelevant to public sector professionals, resulting in skills that are not well-suited for projects in the public sector. Courses using public data sets and public use cases can prepare students to lead and manage projects where public sector values are critical to effective and equitable results/products.
- **Increase diversity in data science:** Courses designed to train technologists have unnecessary prerequisites that dissuade capable students from developing data science capacity and disproportionately impact female and minority students, diminishing the diversity of the field. Courses offered as on-ramps to coding and as core to a data science skill set for the public sector can offer new entry points and smooth transitions for students who have the desire and ability to work in data science.
- **Be responsive to a rapidly evolving field:** Data science tools and applications change rapidly and require an agile curriculum. Programs working cooperatively to share innovative curricula and offer faculty a community of support to adopt/adapt courses in data science can advance data science knowledge and skills faster than working alone.

Ask: Schools joining the consortium may do one or more of the following:

- Identify a faculty liaison who will champion the value of data science curricula and its access for students in their MPA/MPP programs. This faculty member will represent the school in the consortium and contribute to its identification of core knowledge/skills needed for data science in the public sector.
- Encourage faculty who teach data science courses in their MPA/MPP programs to develop them as open educational resources (OER) for other schools of public affairs to adopt/adapt. These faculty should be willing to mentor instructors when first teaching the course if needed. Faculty also can contribute practice sets, projects, or other learning activities if they don't have time to develop an OER course.
- When capacity and modality permits, offer seats in courses to other students in schools of public affairs to take for course credit/audit.
- Host an annual convening of consortium member faculty to share materials/courses in the DS4PS repository and develop new ones to offer to the consortium.