



Using Cloud Technologies to Develop the Data Analysis Skills of Community College Students (UCTDDAS)  
NSF ATE Award # 2100027

## DA/DS 4 All OER Request for Proposals

### Intent

Tech jobs are a key driver of NYC's place in the US economy and the need for tech workers is growing. From 2008 to 2018, jobs in this sector rose 45%, with jobs in the data analytics/data science (DA/DS) category representing 30% of that total growth. Even during the pandemic, the tech sector continued to grow. While NYC's overall employment declined, tech industry jobs grew by 8.7% from February 2020 through December 2021. This resilience has positioned the tech sector as a driver of long-term post-pandemic jobs recovery. In fact, NYC's tech sector is the "single most dependable economic engine and reliable source of new well-paying jobs."<sup>1</sup> The composition of the NYC tech workforce is predominantly White/Caucasian (54%) and Male (71%). The representation of Asians, Hispanics/Latinx, and Blacks/African Americans is at 22%, 12%, and 10%, respectively. In addition, 36% of tech workers are immigrants. These numbers do not represent the diversity of the city's workforce although they are consistent with the lack of diversity in tech observed nationwide.<sup>2</sup>

As the local tech economy and the nature of work continue to evolve, the current rate at which college students graduate with skills in DA/DS is not keeping pace with the demand for skilled data analytics technicians or data scientists. CUNY community college students -primarily members of low-income and diverse communities- are particularly underutilized in the development of the NYC tech workforce.

For the past 3 years, QCC's NSF ATE-funded project [UCTDDAS](#) has been expanding the pool of talent by providing CUNY community college students with the skills necessary to enter the DA/DS workforce in the areas of big data analytics, cloud computing, and biomedical and health informatics. The project has done this work mostly through extra-curricular activities such as summer boot camps, workshops, seminars, and paid internships and research opportunities.

Currently, the UCTDDAS project seeks to connect more students to in-demand skills through the curriculum. Specifically, this RFP invites faculty from STEM and non-STEM disciplines to consider embedding DA/DS modules into their courses, hence igniting DA/DS learning opportunities that are accessible to all. DA/DS 4 All modules should enhance the learning experience of students by promoting data literacy, statistical literacy, exposing students to the work of data professionals

---

<sup>1</sup> <https://nycfuture.org/research/new-yorks-new-jobs-engine>

<sup>2</sup> <https://www.osc.ny.gov/files/reports/osdc/pdf/report-10-2023.pdf>

in various industries, teaching students how to address community-specific challenges using data-informed decisions, teaching ethical data practices, equipping students with data skills applicable to their specific fields of interest, or equipping students with data skills that enable them to be enrolled in specialized DA/DS trainings programs (i.e. enabling non-tech students to pursue tech tracks within their fields of interest or to pursue careers in the tech sector altogether).

Through DA/DS-infused coursework, students from a wide range of programs of study can learn to ask questions, explore data, and draw meaningful insights. Students can get hands-on experience working with real-world datasets, manipulate data, perform statistical analyses, and create visualizations. Students can gain proficiency in tools like Python, R, SQL, or data visualization libraries/software. These skills are directly transferable to the workplace.

### **Timeline:**

**May 31st, 2024:** [Online Proposal Form](#) due <hyperlink to proposal form in our website>.

**June 15, 2024:** Review completed, funded proposals selected and faculty notified.

**May 1, 2025:** Modules proposed are developed and published as OERs.

### **Scope**

The UCTDDAS Project seeks proposals from full- and part-time faculty whose outcomes include:

1. Creation of two 3-hour class sessions organized as 2 hours of lecture and 1 hour of guided computer lab and/or assignment(s) as an Open Educational Resource (OER).
2. Materials should include appropriate assessment of learning outcomes.
3. All materials proposed need to be original OER creation.

Faculty compensation for this proposal will be \$1,000 summer pay.

Any materials adopted, adapted, or created as a result of this grant should adhere to university-wide accessibility standards.

Any original OER materials created must be assigned a Creative Commons License and be submitted to CUNY's institutional repository, Academic Works. CUNY librarians can assist and advise if needed.

Submit any questions to the UCTDDAS PI and co-PI: [mtrujillo@gcc.cuny.edu](mailto:mtrujillo@gcc.cuny.edu), [eyildirim@gcc.cuny.edu](mailto:eyildirim@gcc.cuny.edu).

**Proposals are due by May 31st, 2024**

**The scope of work must be completed by May 1, 2025.**