Introducing Data Science Topics to Non-Computing Majors

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It has become crucial for students in non-computing majors to learn data science techniques, particularly in the context of their own disciplines. A majority of current university data science coursework, however, requires sufficient depth in programming and statistical skills related to managing, manipulating, and analyzing data, which reduces their usefulness for entry-level non-computing majors. This workshop presents a set of hands-on exercises to introduce data science topics, such as data acquisition, preparation, model development and deployment, visualization, and storytelling, to entry-level non-computing majors. A freely-available web-based Data Science Learning Platform (DSLP) will be presented to show how to perform hands-on data science exercises with little or no coding background. The presenters will also share their experiences in using the DSLP tool in an entry-level data science course to non-computing majors at RIT. Both the tool and course materials will be shared with workshop participants. The typical workshop participant is a high school teacher or a college instructor interested in teaching data science at the introductory level. No prior programming or data science experience is needed, thus making the workshop materials usable by a wide audience. Participants need to have a laptop with access to the Internet with a current web browser installed to access the web-based learning platform. This work was supported by the National Science Foundation under Award 2021287.