

HDR² From Harnessing the Data Revolution to Harvesting the Data Revolution

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Modernizing Water and Wastewater Treatment Through Data Science Education and Research

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The field of water and wastewater treatment (W/WWT) is brimming with data analysis opportunities, but many working in the field lack the skills needed to navigate and extract knowledge from this data. This project began in 2019 with the development of a prerequisite-free course in data science and a five-week summer undergraduate research program. Both were populated with real problems and data from our W/WWT industry partners. The program has evolved to include a workshop in data science training for industry professionals, an advanced internship program, and a summer workshop in data science for environmental engineering students. A textbook from the course material is being developed, along with a dataverse that archives and publicizes all of the datasets that we have received from our stakeholder partners. Furthermore, appropriate but rarely used statistical methods in W/WWT have been identified and are being developed for these special types of problems.

Research

Education and Outreach

Data & Cyberinfrastructure

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