Education and Outreach Leveraging the VDC

Timeline and Goals

Year One (2017)
- Identified existing resources, tools, and potential partners
- Outlined the framework for workshops and seminars

Year Two (2018)
- High school Big Data workshop developed and delivered
- Data-intensive application and lesson plan for high school
- Big Data Career seminar series for undergraduate students launched
- Data Management seminar for graduate students and early career researchers launched
- Tools, resources, and learning modules available for broad implementation at other locations via the VDC website
- Raise awareness of VDC resources among high school teachers, faculty and researchers

Year Three (2019) — Going Forward
- Focus will be on delivering educational programs while leveraging the VDC platform for collaboration in the context of large data sets, ex: Protein Data Bank (PDB) and Ocean Observatory Initiative (OOI) use cases
- Make available broadly curated datasets for use in courses allowing students to learn with real data
- Leverage existing data, curriculum, and cross-cutting scenarios to improve computer science curriculum
- A set of online learning modules for undergraduate curriculum
- Education module for researchers to include references and links to existing resources as well as newly developed tools and resources resulting from VDC project
- VDC Data Management Resource Guide

Workshops and Seminars

High School Workshop Module: Dive Into Big Data and Large Scale Computing
- Tour of state-of-the-art facilities at Rutgers Discovery Informatics Institute (RDI²)
- Fundamentals of Data Science tutorial
- Introduction to VDC and OOI research initiatives
- Graduate student mentors guide students through Interactive workshop - students experiment with live oceanographic data to develop a web-based dashboard that continuously displays data streaming real-time from under water sensors (OOI data)
- Researchers & grad students share their career journeys

Undergraduate Resource Module: Data Science Career Panel
- Industry experts share pathways to Big Data careers
- Provides an opportunity for students to learn about data science career paths and network with industry experts
- Resulting videos made available for use as resource in undergraduate curriculum

Early Career Researcher Seminar Module: Introduction to Data Management
- Launched in May 2018 in collaboration with the VDC Data Services project team at Rutgers; to be delivered at Temple University in June 2018
- Review of best practices for managing research data and discussion on existing resources and tools for data sharing, collaboration, and reproducible research; compiled feedback from postdocs and graduate students regarding data management requirements