

Diving into Big Data: Large Scale Computing Workshop for High School Students

Program Description

The **objectives** of the high school Big Data workshop are:

- Expose students to state-of-the-art resources and techniques for scientific investigations and to analyze and draw conclusions from complex data.
- Effectively engage and support students in learning from and about scientific data.

These objectives will be accomplished through the following:

- Presentation on fundamentals of large scale computing and data science
- Expose students to Impact and application of Big Data in various industries
- An interactive Hands-on workshop
- We will measure success by creating a survey and quiz that provides feedback to RDI² on the student experience, what was learned and how well they retained information.

Hands-On Activity:

During the hands-on activity, students will experiment with live oceanographic data coming straight (real-time) from underwater sensors located approximately 300 miles off the coast of Oregon. After a brief introduction to the Virtual Data Collaboratory and Ocean Observatory Initiative research projects led by RDI², students will individually leverage their programming skills to develop a Python dashboard displaying data streaming from the Pacific Ocean seafloor. The dashboard will continuously display raw data, plots and the result of various simple transformations.

OOI Resources on Education for teachers and students to explore:

<http://education.oceanobservatories.org/>



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