University of Southern California
VITERBI SCHOOL OF ENGINEERING

Master of Science in Environmental Data Science
Program Learning Objectives

The purpose of the USC Viterbi School of Engineering Master of Science in Environmental Data Science is to prepare students for high level professional employment in the environmental sector that require the use of data science techniques, or to pursue advanced graduate studies focusing on related problems in the field.

- USC students enrolled in the USC Viterbi School of Engineering Master of Science in Environmental Data Science program will learn about the use of data science technologies to complement interdisciplinary analyses of complex environmental issues ranging over many topics such as climate change, water and air pollution, policy analysis, terrestrial and aquatic ecosystem management, biodiversity and many others.
- USC students enrolled in the USC Viterbi School of Engineering Master of Science in Environmental Data Science program will learn a range of data science skills such as developing scalable data systems, using state-of-the-art software and infrastructure for data science, designing data analyses with statistical methods, applying machine learning and data mining techniques, designing effective visualizations, and working in multi-disciplinary data science teams.
- Upon completion of the USC Master of Science in Environmental Data Science, students will have a foundation in the central theories, concepts and principles of natural sciences while training them with data science skills that can be used for environmental problems. They will also understand how to leverage data to form and frame relevant questions in environmental management and sustainability, identify patterns, and make actionable insights to understand and protect Earth's natural resources.
- Upon completion of the USC Master of Science in Environmental Data Science, students will be able to pursue a range of professional paths in research and environmental data management that aligns with skills requirements for positions in such areas as state and federal government natural resource regulation, academic research, environmental consultation and non-profit environmental advocacy, restoration planning, conservation and wildlife management, remote sensing specialists, and corporate responsibility and monitoring.