



SECOORA

Southeast Coastal Ocean Observing
Regional Association

SECOORA 2019 Data Challenge: Using Web Camera Data for Environmental Monitoring

A competition seeking contestants to transform web cameras into environmental monitoring tools that tackle real-world questions and problems.

Overview

Web cameras are transforming environmental monitoring. Increasingly, scientists are analyzing video data to improve forecasts, answer questions, and support decision making.

Although camera data are being applied for environmental monitoring, they are currently underutilized. The Southeast Coastal Ocean Observing Regional Association (SECOORA) is asking the next generation of data experts to identify ways in which video footage can be applied for societal benefits.



 SECOORA is collaborating with Surfline for this project. Pictured is the Surfline camera located at Cherry Grove Pier South Carolina. Image Credit: Surfline

Goals of the SECOORA Data Challenge

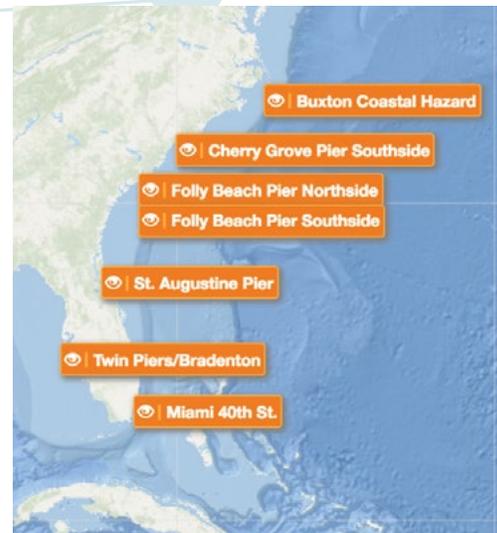
- 1** Encourage the use of data resources available from SECOORA (secoora.org).
- 2** Use technologies, tools, videos, and creativity to visualize, analyze, and apply WebCAT data in order to tackle real-world questions/problems.
- 3** Build on and enhance existing SECOORA initiatives.
- 4** Provide students and young professionals with the opportunity to develop a competitive proposal.

About the Dataset

SECOORA and Surfline support seven coastal cameras in the southeastern U.S. that are specifically deployed to help address coastal issues. Scientists can use the video data to count right whales, spot rip currents, validate wave run up models, and understand human use of natural resources. This unique project, titled Web Camera Applications Testbed (WebCAT), leverages the expertise and capabilities of private, nonprofit and public sectors. Visit the WebCAT site to view the camera locations, access camera footage, and learn more about the project: <https://secoora.org/webcat/>.

Each WebCAT camera has almost one year of archived video data. Data challenge contestants must use the WebCAT camera data and create a data visualization, mobile application, product, tool or some other creative submission that answers a real-world question or solves a problem.

Click here for more information on the WebCAT dataset.



 Pictured are the locations of the 7 WebCAT cameras. Data is made possible by the below partners:



Prizes

We are offering two prizes in two different categories. You can work as an individual or in teams. If working as a team, all members must meet the eligibility requirements.

Category 1: Undergraduate Student(s)

PRIZE IS \$3,000

For eligibility, applicants must:

- reside in and attend an academic institution in the United States,
- be an undergraduate student,
- the individual or team must have an advisor/mentor from the institution they attend,
- must be enrolled as an undergraduate student during the fall 2018 semester, and
- propose a project that incorporates data from at least one of the seven of the WebCAT cameras.

Category 2: Other

PRIZE IS \$3,000

For eligibility, applicants must:

- reside in the United States,
- be a graduate student OR an early career professional (working less than five years from your most recent graduation date),
- the individual or team must have an advisor/mentor, and
- propose a project that incorporates data from at least one of the seven of the WebCAT cameras.

How to Apply

Proposals must follow the required proposal format. **Proposals that do not follow the required format will not be evaluated.**

Maximum page length is **5 pages (does not include appendices)**. Text should be **12-point font**, all margins **1-inch** and **must include** the following components:

Title Page (Proposal Cover Sheet) is limited to 1 page and must include:

- Proposal Title
- Category under which you are applying: Category 1 or Category 2
- Lead applicant's name and complete contact information
- Team members, if any, and complete contact information.
- Advisor name and contact information (i.e. professor supervising work)
- Project summary (1 paragraph)

Project Description is limited to 4 pages and must include:

- Statement of the issue to be addressed
- Description of the product or tool that will be developed
- Statement of how the project will directly benefit specific users or stakeholders (please list all partners if there are any)
- Goals, objectives and anticipated results
- Methodology or approach, including:
 - Explanation of the technical approach
 - Data analysis and/or visualization techniques that will be employed
- Describe project deliverables and how results will be shared with users/stakeholders. Upon completion of the project you will need to:
 - Provide a brief report on how the data was used for the project.
 - Produce a short video on the project, and it's value to you and potential users.

The following appendices are required (unless otherwise specified); however, they do not count towards the page limit.

- Appendix 1:** Project timeline that lists the project objectives and when you plan to complete each objective and submit your final results to SECOORA (note the project must be completed by December 31, 2019). (1-page maximum)
- Appendix 2:** For undergraduate and graduate students, a signed letter of support from their major professor is required stating you are a student in good standing. For early career professionals, a letter of support from their hiring manager/supervisor is required.
- Appendix 3:** One-page resume or curriculum vitae (CV). If working in a team, please provide the one-page resume or CV for each team member.

TIP

Check off the boxes as you develop each part of the proposal!

Evaluation Criteria

Evaluation criteria are the same for ALL categories.

- 25% Creativity and Innovation
- 25% Demonstrated Value to a Stakeholder
- 20% Technology/Scientific Merit
- 20% Methodology
- 10% Follows Proposal Guidelines

“ I am humbled and honored to have been selected as the recipient of the data challenge award. Winning the data challenge provides me an opportunity to apply skills gained in my courses. ”



John Mwaniki, Computer Science Student at Kenneaw State University and SECOORA 2017 Undergraduate Data Challenge Winner

Submit Your Proposal

Each applicant or team will need to submit the entire proposal package electronically in PDF format in their eligible category by **5:00 PM ET on February 15, 2019** to Abbey Wakely (abbey@secoora.org) and cc Jennifer Dorton (jdorton@secoora.org).

All proposals will be evaluated based on the review criteria and if chosen as the winning project, the successful applicant will have until December 31, 2019 to complete the project. All winning projects will be featured on secoora.org. Proposals can only be submitted in one category.

Timeline

January 18, 2019

At 12 PM ET join us for a SECOORA Data Challenge Kick Off Webinar. Register by clicking [here](#).

January 31, 2019

Register for the Data Challenge by clicking [here](#). This part is optional, but encouraged. If you do sign up, deadline reminders and a FAQ shared via e-mail.

February 15, 2019

All proposals are due via email to Abbey Wakely (abbey@secoora.org) and a cc Jennifer Dorton (jdorton@secoora.org), with the subject title: [Category 1 or 2] SECOORA Data Challenge Proposal. Applicants may be contacted and asked to discuss their project with judges on a webinar.

March 22, 2019

Winners are notified.

December 31, 2019

Full projects are completed. Final product deliverables are submitted to SECOORA and include the product/application and all appropriate documentation. The use of open source software is encouraged, and all final products should allow for unrestricted distribution on the SECOORA website by January 31, 2020.

Questions?

Questions regarding proposal submission may be submitted to abbey@secoora.org. Good-faith efforts will be made to answer as many questions as possible, but an answer is not guaranteed for every question.

Award Disbursement Information

Winners will receive half of the award (\$1500) by May 2019. Upon completion of the project, winners will need to provide a brief report and video on the project, and the value/impact of the work. Once deliverables are approved, winners will receive the remaining portion (\$1500) of the award. Award winners will be responsible for all tax liabilities associated with the winnings and a 1099 will be disbursed by SECOORA by February 1, 2020.

This is an open and competitive process. SECOORA reserves the right to reject any and all applications/proposals received as a result of this process. SECOORA reserves the right to request that applicants make modifications to proposals at any time before an award is made.

