

WebCOOS: Webcam Coastal Observation System

Greg Dusek, NOAA

Theo Jass & Debra Hernandez, SECOORA

Joe Long, UNCW

Dwayne Porter, Jeremy Cothran & Louisa
Schandera, U of SC

Alex Pang, Akila de Silva, Fahim Khan, UCSC

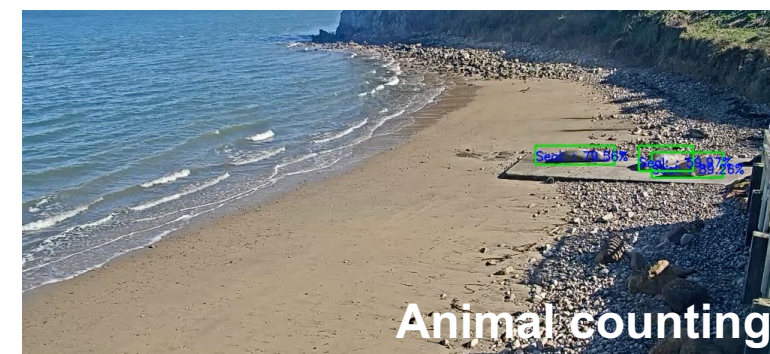
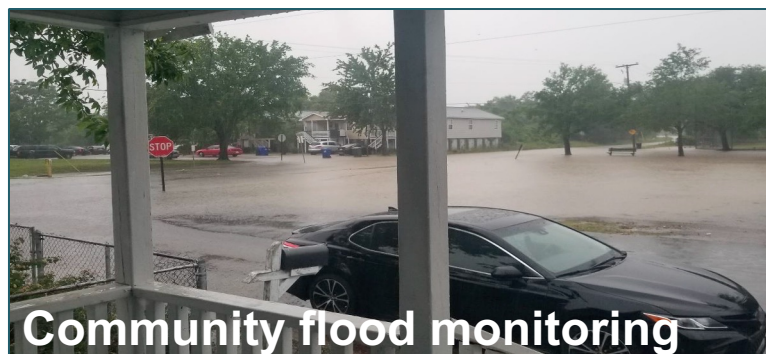
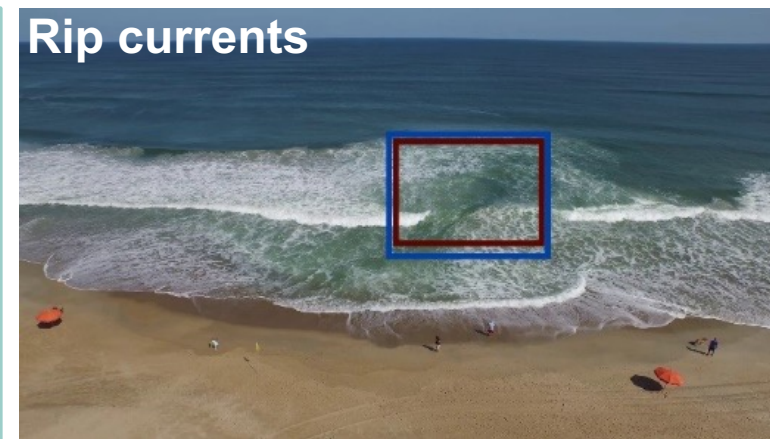
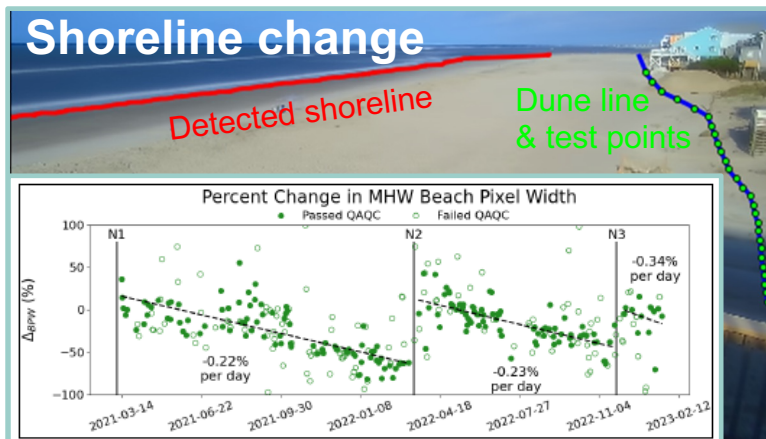
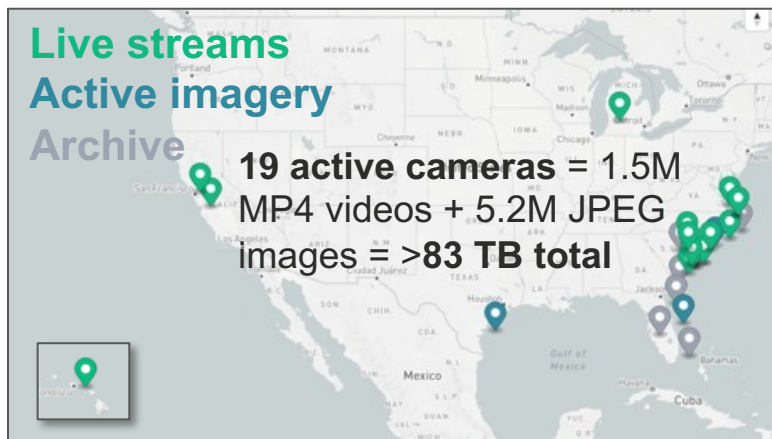
Rob Bochenek, Lauren Showalter, Josh
Rhoades, Axiom



Overview: Webcam Coastal Observation System

Developing an operational webcam coastal observing network

2017 WebCAT → 2020 Launching WebCOOS → 2023 National WebCOOS

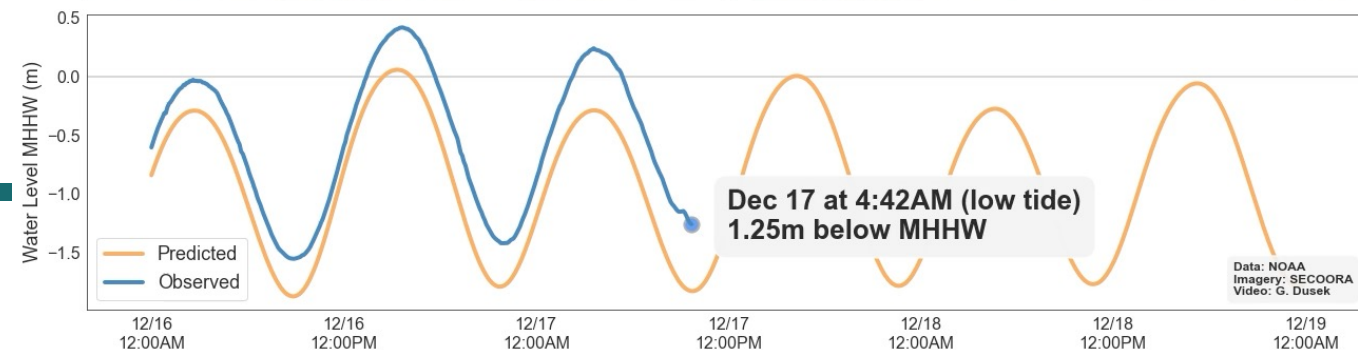
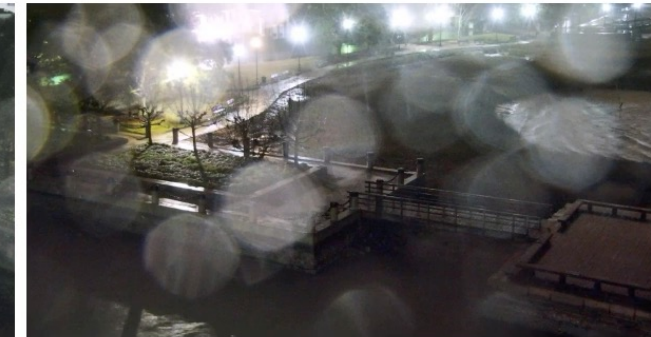


Accomplishments: past year

- Integrated 7 cameras:
 - Charleston Harbor, SC
 - Dorchester St., Charleston, SC (*archived*)
 - Beaufort, NC
 - Walton Lighthouse, CA
 - Horace Caldwell Pier, TX
 - Masonboro Inlet, NC
 - Cocoa Beach, FL
- Integrating AI/ML algorithms operationally: scaling to multiple cameras in the cloud in near real time
- Planning & prepping for next steps...



Coastal Flooding on Dec 17, 2023 in Charleston, SC
WebCOOS imagery and NOAA water level data



Looking Ahead

- National WebCOOS: 60 cameras in 3 years
 - 6 cameras per IOOS RA
 - Finalizing contractor for installations & operations
 - Applying relevant AI/ML algorithms to new webcams
 - 2 workshops: technical & applications
- Other collaborations
 - NOAA NOS: Additional NWLON cameras
 - NOAA NWS: marine fog & sea state
 - USGS [CoastCams](#): Madeira Beach, FL camera → WebCOOS
 - USACE ERDC [CorpsCam](#)
 - Local lifeguarding, beach safety, public health, community development agencies & organizations

