

Michael Amelunke

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Summary of GIS Experience

Mississippi Department of Marine Resources: GIS Intern, June 2018 - August 2018

New Round Island Project: Presented a method to eliminate unwanted reflectance in 7 months of LIDAR data on New Round Island and proposed a method to visualize this extensive dataset. Used geoprocessing tools to make, edit, analyze, and visualize rasters and to convert data. Used ModelBuilder within Arc Pro to create a more organized and efficient way to recreate my process for each of the subsequent months. Created 3D models of each raster for each month. Utilized Meshlab and Blender to better visualize these 3D models and to create an animation showing the month-to-month change in elevation.

Miscellaneous Projects: Helped visualize Mississippi's estimated shoreline loss/gain over the next 10 and 50 years. Identified shoreline areas that have bulkheads in the back bay of Biloxi. Published layers from both of these projects onto a server. In addition to these projects, I helped collect elevation data on Cat Island and New Round Island.

Miscellaneous Achievements: Received second place for a poster I created covering my New Round Island project at the 2018 Mississippi Geospatial Conference.

Marine GIS (Coursework, Spring Semester 2018)

Miscellaneous Assignments: Created a visual image of the fluctuations in sea surface temperature in the Gulf and created a map of this data. Used data of an artificial reef to create a bathymetric map. Used the editing feature in Arc Map and imagery collected on two separate dates to estimate land loss for one of the barrier islands.

Education

University of Southern Mississippi: January 2017 - Present

- Majoring in Geographic Information Technology and minoring in Marine Science.
- Cumulative GPA of 3.538.
- Awarded the Transfer Academic Scholarship and Transfer Out-of-State Scholarship from USM.
- Relevant Coursework: Marine GIS, Introduction to GIS (Current), Calculus 1 and 2, Linear Algebra, The Oceans, Marine Science 1: Oceanography with lab (Current), Marine Science 2: Marine Biology with lab.

Three Rivers Community College: August 2015 - May 2016

Other Work Experience

Audubon Mississippi Coastal Bird Stewardship Program: May 2017 - August 2017

Worked alongside biotechnicians and biologists to count Least Tern populations along the coastline, gather data within nesting sites, and act as a steward at nest locations.

Tidelands Nursery: September 2017 – November 2017

Contributed to the Marsh Island restoration project by preparing *Spartina* for shipment and planting.

Other Work Experience, Continued

Petco: May 2017 - May 2018

Town and Country Grocers: June 2014 - December 2016

Sonic Drive In: September 2012 - June 2014, August 2016 - December 2016

Personal Information

I'm originally from Missouri, but I moved to south Mississippi in early 2017. I have a saltwater aquarium that houses my Tesselata eel. I'm also raising a baby terrapin for the Department of Marine Resources to release back into the wild at a later date. In addition to all of this, I'm learning how to play golf.