

SHANICE BAILEY

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EDUCATION

Columbia University Graduate School of Arts & Science
Graduate Student in Physical Oceanography **2018 – Present**

Columbia University School of Professional Studies
Postbaccalaureate Student **2017 – 2018**

Boston University
B.A., Environmental Sciences & Wildlife- Ecology/Management **2012 – 2016**
Thesis: “Feeding Behavior of African Elephants (*Loxodonta africana*) in Tarangire-Manyara ecosystem”

TEACHING EXPERIENCE

PyClub Outreach program **2020-Present**

Collaborating with colleagues in the Ocean & Climate Physics division to develop a high school level afterschool outreach program teaching local students Python programming through the scope of oceanography. The curriculum is currently being developed and is scheduled to pilot as a virtual program in Spring 2021.

Teaching Assistant for Science for Sustainable Development **Fall 2020**

Was a TA for an undergraduate course that provided fundamental knowledge on some topics within the natural sciences that are critical to addressing sustainable development. After completing the course, students should be able to incorporate scientific approaches into their research or policy decisions and be able to interpret scientific methods of data analysis.

Curriculum Innovation Grant Fellow **2020**

Developed a technical training curriculum that promotes expanding skills in research computing. Software Carpentry certified, and trained in teaching technical topics, working closely with Columbia University’s Foundation for Research Computing Program to facilitate a workshop that executes the developed curriculum.

Girls Who Code Teacher **2019**

Developed syllabus and overall course structure, lecture the class and design practice problems.

Tutor for Boston University Initiative for Literacy & Development **2012 – 2016**
 Tutored K-12 grades with homework and test prep, and created activities that promoted math and literacy development in an afterschool program run by the local YMCA.

RELATED EXPERIENCE

LDEO Ocean Transport Group
Graduate Research Assistant **2018 – Present**
 Current research project, under the advisement of Ryan Abernathey, focuses on quantifying the thermodynamics and interannual variability of water masses formed in the Weddell Sea region of the Southern Ocean. Investigation of the interior region is done through the use of water mass transformation theory and numerical models.

Environmental Systems Research Institute (Esri)
Product Engineer Intern **Summer 2020**
 Interned as a Product Engineer within Esri's Spatial Analysis team. Completed goal for the summer to develop a prototype solution to calculate the optimal route for maritime transit and transport while considering three major cost factors: time, energy and safety. The tool will ultimately provide users to customize their optimal route solution based on their unique, weighted set of priorities.

School for Field Studies
Student/Researcher **2015**
 Created original elephant feeding behavior research project in the Tarangire-Manyara ecosystem, northern Tanzania – while under the advisement of Dr. Kioko, Wildlife Ecology professor. Devised the methods, wrote the proposal, conducted field data collection and analysis, composed final research paper and presented results to local community.

Boston University Michael Dietze's Lab
Research Assistant **2012**
 Assisted a Boston University PhD candidate, Joshua Mantooth, with research in Harvard Forest. Collected tree core samples, entered data and analyzed cores' ages and integrity through the program, Windendro.

LANGUAGES

English– native language

Spanish– speak, read, and write with basic competence

Mandarin– speak with basic competence

MEMBERSHIPS

Girls Who Code - Teacher

American Geophysical Union – Member

Software Carpentry – Instructor