Welcome to C4C:
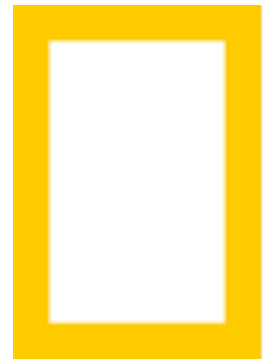# Coding for Conservation!

June 2022 – March 2023

Thanks to our sponsors!

Course Syllabus

https://docs.google.com/spreadsheets/d/1NxoWXWjJQMAHUbshYlE9oUVd0FoKkl1ux2dw5pfOf2M/edit#gid=0

All Lessons will be held from 5:30-7pm Madagascar time (9:30-11am US CT) unless noted otherwise

Week	Date	Topic	Format	Zoom Link for Session	Instructor	
0	Friday, June 10	Open office hours to answer questions	In person: RedZone Tsimbazaza https://goc	https://uchicago.zoom.us/j/99876	Theresa Laverty	
1	Monday, June 13	Intro to Program + Student Research Presentations	Lecture + Brief Presentations	https://uchicago.zoom.us/j/95255	Cara Brook	
1	Wednesday, June 15	Models and Data lecture + work time for data visualization tutorial	Lecture + Tutorial	https://uchicago.zoom.us/j/94541	Cara Brook	
2	Monday, June 27	Linear regression and simple statistics lecture	Lecture	https://uchicago.zoom.us/j/91835	Kacie Ring / Sophia Horigan...+ Imani Russell as TA	
2	Wednesday, June 29	Linear regression and simple statistics tutorial	Tutorial	https://uchicago.zoom.us/j/91835	Kacie Ring / Sophia Horigan...+ Imani Russell as TA	
3	Monday, July 11	Intro to mixed modeling lecture	Lecture	https://uchicago.zoom.us/j/99896	Emily Ruhs/David Klinges	
3	Wednesday, July 13	Intro to mixed modeling tutorial	Tutorial	https://uchicago.zoom.us/j/99896	Emily Ruhs/David Klinges	
4	Monday, July 25	Community biodiversity analysis lecture	Lecture	https://uchicago.zoom.us/j/99929	Katie Young	
4	Wednesday, July 27	Community biodiversity analysis tutorial	Tutorial	https://uchicago.zoom.us/j/99929	Katie Young	
5	Monday, August 8	Building and fitting compartmental models in ecology	Lecture	https://uchicago.zoom.us/j/99757	Katie Gostic	
5	Wednesday, August 10	Building and fitting compartmental models in ecology	Tutorial	https://uchicago.zoom.us/j/99757	Katie Gostic	
6	Monday, August 22	Model evaluation and comparison	Lecture	https://ucsb.zoom.us/j/87596509637	Samantha Sambado/Tatum Katz	
6	Wednesday, August 24	Model evaluation and comparison	Tutorial	https://ucsb.zoom.us/j/84057887911	Samantha Sambado/Tatum Katz	
7	Tuesday, September 6	Intro to occupancy modeling	Lecture	https://uchicago.zoom.us/j/99418	Theresa Laverty	***Note date change, as Monday is a US holiday***
7	Wednesday, September 7	Intro to occupancy modeling	Tutorial	https://uchicago.zoom.us/j/99418	Theresa Laverty	
8	Monday, September 26	Full group check-in + research updates	Lecture + Brief Presentations	https://uchicago.zoom.us/j/94061518(	Cara Brook	
9	Monday, October 24	Full group check-in + research updates	Lecture + Brief Presentations	https://uchicago.zoom.us/j/94061518(	Cara Brook	
10	Monday, November 21	Full group check-in + research updates	Lecture + Brief Presentations	https://uchicago.zoom.us/j/94061518(	Cara Brook	
11	Monday, December 19	Full group check-in + research updates	Lecture + Brief Presentations	https://uchicago.zoom.us/j/94061518(	Cara Brook	
12	Sunday, January 16	Full group check-in + research updates	Lecture + Brief Presentations	https://uchicago.zoom.us/j/94061518(	Cara Brook	
13	Sunday, February 13	Full group check-in + final research presentations	Final Presentations	https://uchicago.zoom.us/j/96497	Cara Brook	
13	Tuesday, February 15	Full group check-in + final research presentations	Final Presentations	https://uchicago.zoom.us/j/96497	Cara Brook	

Mentors

Student Name	Student Email	Mentor Name	Mentor Email
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Angelo Andrianiaina	angelo.andrianiaina@gmail.com	Theresa Laverty	tlaverty@uchicago.edu

Mentor – Student Goals

Week	Date	Goal
1	Monday, June 13	Define research questions for project
1	Wednesday, June 15	Define research questions for project
2	Monday, June 27	Explore individual datasets
2	Wednesday, June 29	Refine research questions
3	Monday, July 11	Outline plan for research analyses on independent work
3	Wednesday, July 13	Outline plan for research analyses on independent work
4	Monday, July 25	Outline 3-5 figures and accompany analyses for final paper
4	Wednesday, July 27	Outline 3-5 figures and accompany analyses for final paper
5	Monday, August 8	Begin work on figures for final paper
5	Wednesday, August 10	Begin work on figures for final paper
6	Monday, August 22	Conclude Figure 1 for final paper
6	Wednesday, August 24	Conclude Figure 1 for final paper
7	Tuesday, September 6	Conclude Figure 2 for final paper
7	Wednesday, September 7	Conclude Figure 2 for final paper
8	Monday, September 26	Conclude Figures 3-4 for final paper
9	Monday, October 24	Conclude Figure 5 for final paper (if applicable) + outline plans for writing manuscript
10	Monday, November 21	Write introduction to final paper
11	Monday, December 19	Write methods for final paper
12	Sunday, January 16	Write results for final paper
13	Sunday, February 13	Write discussion for final paper to complete first draft
13	Tuesday, February 15	Write discussion for final paper to complete first draft
After Course Concludes	March-April 2023	Submit final paper to peer-reviewed journal

Preparation

https://coding4conservation.org/preparation

Preparation

> 🥳 Congratulations on your selection for Coding-4-Conservation 2022!
>
> Please familiarize yourself with the preparation materials below in order to prepare for the upcoming workshop.

Software installations

We ask that you please begin to familiarize yourself with the computer programs that will be used throughout the duration of the training. You will need a personal computer with internet access in order to participate, though funds are available to support the purchase of data credit to facilitate your participation. *If you do not have access to a computer, please email Cara Brook at* cbrook@uchicago.edu *immediately to find a solution.*

Once you have selected a computer for use for the workshop, please be sure that the following programs are installed and working:

- Excel, or a compatible spreadsheet software such as [Google Sheets ↗](#)
- R – a statistical programming language ([Windows ↗](#), [Linux ↗](#), and [macOS ↗](#))
- [R Studio ↗](#) – a user interface for R that will be needed for computer exercises

Preparatory tutorials

After you have installed R and R studio on your computer, **please begin to work through the [four tutorials (ZIP download)](#).** All of them are extensively annotated with directions. If you have any problems loading and/or the software, please let us know immediately. We expect you to be familiar with all material presented in these tutorials prior to the first meeting on June 13.

If you are struggling with the installation and/or introductory tutorials, you can find additional instruction at [W3 Schools - R Introduction ↗](#). Please review the material as needed.

Student Profiles

https://coding4conservation.org/students

https://airtable.com/shrULfcw3tiT5UeYX

Students

Here are some profiles about the students in the 2022 cohort, and their projects...

Mahandry Andrianarimisa

Mahandry is a PhD student in Conservation Biology at the University of Antananarivo. His project will focus on host-parasite specificity of frog-biting midges in the Corethrellidae family and the impact of light and noise pollution inside natural habitats on that parasitism system in Madagascar. This will be the first detailed study on the Corethrellidae family (biting midges) in Madagascar. It would also serve as a guide to protected area managers on the acceptable level of sounds and light pollution in ecotourism spots.

Mahandry holds a Master's degree in Conservation Biology from University of Antananarivo, during which he developed techniques for sampling these frog-biting midges. He also holds a Bachelor's degree in organismal and ecosystems biology from the University of Antananarivo. Mahandry enjoys cultural exchanges, travel and discovery, singing and playing guitar, wildlife documentaries, comedies and action movies.

Angelo Andrianiaina

Angelo is a PhD student in the Department of Zoology and Animal Biodiversity at the University of Antananarivo. His project will focus on the seasonal dynamics of Bartonella in Malagasy fruit bat ectoparasites. Angelo hopes this information will aid in the comprehensive understanding of Malagasy fruit bat population health and corresponding conservation efforts.

Angelo holds a Master's Zoology and Animal Biodiversity as well as a Bachelor's in Animal Biology, Ecology,and Conservation from University of Antananarivo. Angelo is also the Communication Officer and Co-founder of the conservation biologists Association Ary Saina and an active member of GERP (Groupe d'Etude et de la Recherche sur les Primates de Madagascar).

Zo Samuel Ella Fenosoa

Join the Slack!
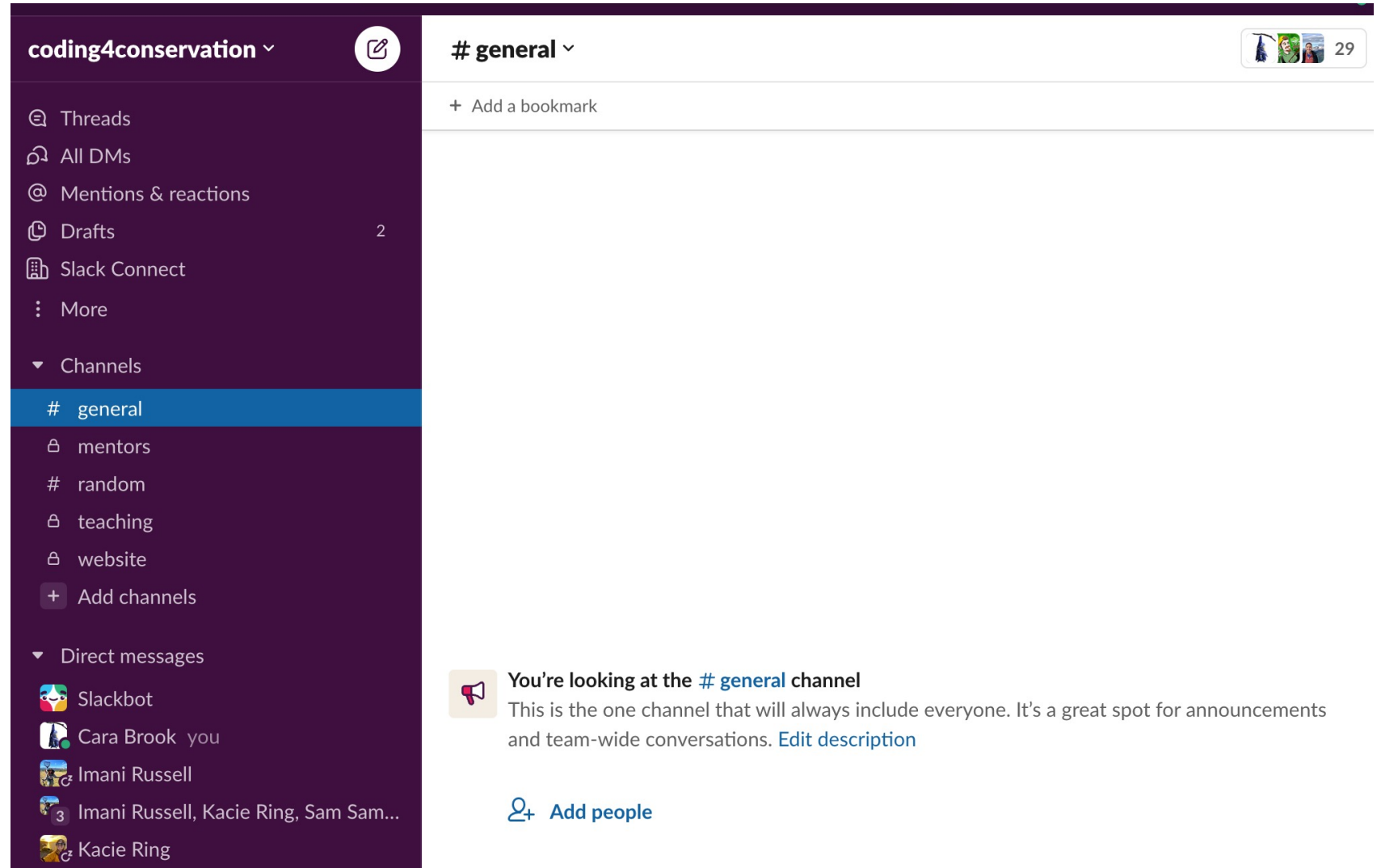
https://join.slack.com/t/coding4conservation/shared_invite/zt-1abg2m0jo-LXqO4fXkS3qXz~sy2Mpfow

Data Needs

- Survey indicated a preference for mobile money and data to take calls from home

- We can provide 20,000Ar/week/student x 13 scheduled weeks with zoom.

- We can provide scratch cards in advance or reimburse your own data purchases if receipts are provided.

- We will keep tabs on data needs and have some budget to increase this, especially in the later months of the course if needed.

Misaotra!