Tanya Berger-Wolf

Al for Conservation: AI and Humans Combatting Extinction Together

Photographs, taken by field scientists, tourists, automated cameras, and incidental photographers, are the most abundant source of data on wildlife today. I will show how computational methods can be used to turn massive collections of images into high resolution information database, enabling scientific inquiry, conservation, and citizen science. I will demonstrate how computational data science methods are used to collect images from online social media, detect various species of animals and even identify individuals. I will present data science methods to infer and counter biases in the ad-hoc data to provide accurate estimates of population sizes from those image data.

I will show how it all can come together to a deployed system, Wildbook, a project of tech for conservation non-profit Wild Me. We have built Wildbooks for over 20 species of animals, including whales (flukebook.org), sharks (whaleshark.org), giraffes (giraffespotter.org), and working on elephants. In January 2016, Wildbook enabled the first ever full species (the endangered Grevy’s zebra) census using photographs taken by ordinary citizens in Kenya. The resulting numbers are now the official species census used by IUCN Red List and we repeated the effort in 2018, becoming the first certified census from an outside organization accepted by the Kenyan government. Wildbook is becoming the data foundation for wildlife science, conservation, and policy. Read more: https://www.nationalgeographic.com/animals/2018/11/artificial-intelligence-counts-wild-animals/

Tuesday, April 2, 2019
2:00pm to 3:00pm
4405 Gates Hillman Center