



## About Wild Me

As the price of photography and video equipment drops while quality and availability improve (think “GoPro”), images and video from tourism are becoming the most abundant and inexpensive sources of wildlife data. If these images could be widely obtained, rapidly analyzed and combined with related data (e.g., location, date, behavior), then scientists and conservation managers could benefit from larger and broader data sets. An increase in well managed data input and processing enables advances in analysis and modeling of animal populations, supporting deeper insight and better methods of protection for threatened and endangered animals.

Wild Me ([www.wildme.org](http://www.wildme.org)) - a 501(c)(3) non-profit organization focused on wildlife conservation - is uniquely comprised of IT professionals and computer scientists, advised by preeminent wildlife biologists. Wild Me is the non-profit home of Wildbook (<http://www.wildbook.org>). Wildbook is the open source software platform that has emerged out of our non-invasive mark-recapture work on sharks and rays. As additional researchers saw the success of our online, citizen science model developed originally for whale sharks ([whaleshark.org](http://whaleshark.org)), they asked to reuse our study design and software for other species (zebras, humpback whales, polar bears, ragged tooth sharks, etc.). We made our software open source and built collaborations with researchers at Princeton, Rensselaer Polytechnic Institute, and the University of Illinois-Chicago, allowing us to grow our data science and computer vision capabilities for new species and new challenges. Wildbook is now a multi-institution, multi-disciplinary team applying Cloud-based data management, computer vision, and A.I. to wildlife monitoring with a strong, original focus on sharks and rays.

## Project: Wildbook for Whale Sharks

Wild Me’s flagship wildlife project is “Wildbook for Whale Sharks” (<http://www.whaleshark.org>) - a project launched in 2003 (among the earliest citizen-science efforts online) that supports collaborative, global-scale research for the world’s biggest fish: the Endangered whale shark. We currently blend two computer vision algorithms to help identify individual whale sharks from the photo catalogs of researchers, tourists, and tour operators. Wildbook serves a community of 130+ shark

researchers and volunteers around the globe and has non-invasively “tagged” 8100+ whale sharks since 2003. 5200+ divers and snorkelers have contributed data leading to [a long list of scientific publications](#).

Match Score: 819.00 (Match 1 of 35)



Number = <a href="#">eb6613ad-a7e0-4753-854a-670351e4898c</a> Date = 2008-05-17 Sex = unknown Assigned to = A-112 Size = unknown Location = Ningaloo, Australia Location ID = 1a	Number = <a href="#">258200915451</a> Date = 2009-06-06 11:15 Sex = male Assigned to = A-112 Size = 7.0 meters Location = Ningaloo Marine Park (Northern) Location ID = 1a1
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*Computer vision matches individual whale sharks, using spot patterning as “digital fingerprints”. This YouTube video describes how we uniquely use A.I. to datamine YouTube for whale shark sightings and manually map their spots before algorithmic recognition: <https://youtu.be/KDgAxkzFiFO>*

## About Jason Holmberg

Jason Holmberg has logged thousands of hours of development time on Wildbook and Wildbook for Whale Sharks. As Wild Me’s Information Architect, he has designed and implemented new tools to support digital pattern recognition (computer vision + artificial intelligence) for whale sharks, humpback whales, and sperm whales. Using Jason’s tools, our projects have been able to categorize and manage a large amount of wildlife data and to identify individual animals from multiple photos taken by different researchers many years apart.

Jason was lead author and population modeler for two widely lauded papers covering whale shark population trajectories at Ningaloo Marine Park in Western Australia, demonstrating that citizen science data can provide improved insight and population models through greater acquisition of high quality data.