



Theodore Roosevelt
GENIUS PRIZE

Winner for Prevention Wildlife Poaching and Trafficking

Genetic Database to Repatriate Confiscated Turtles and Coordinate Among States By JJ Apodaca, Ph.D., Tangled Bank Conservation

The idea in this submission intends to leverage information from genomic databases that use sequencing technology as a tool to streamline the processing, testing, and ultimate release of confiscated turtles, back to the area where they genetically originated. The plan is to initially focus on the three most heavily trafficked turtle species in the United States—the Eastern box turtles, alligator snapping turtles, and Blanding’s turtle—this tool could be applied to combine efforts of Federal and state agencies to facilitate the multifaceted repatriation of confiscated turtles. Implementation of this tool could also help focus law enforcement to poaching hot spots to prevent wildlife poaching and trafficking in biologically important areas.





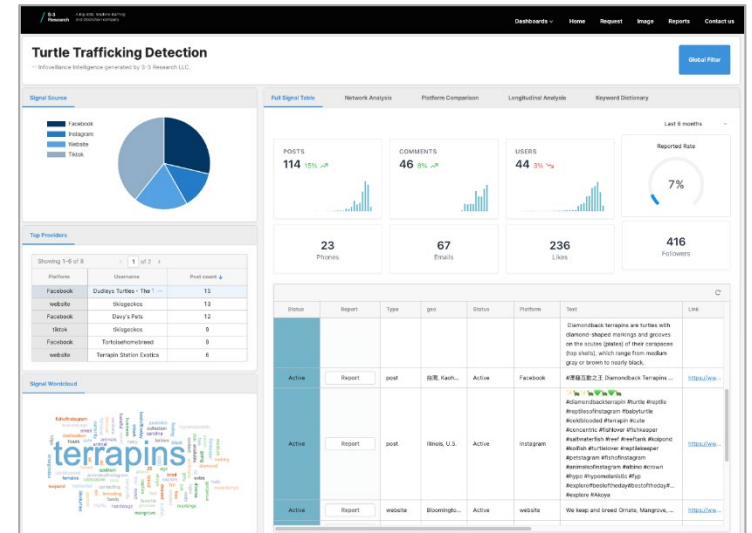
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Artificial Intelligence Big Data and Machine Learning Multiplatform Detection and The Compliance System for Identifying and Reporting Illegal Online Sellers of Wild Freshwater Turtles

By Tim Mackey, MAS, Ph.D., S-3 Research

The idea in this submission is to use an automated artificial intelligence tool for extensive data analysis to identify and classify information on suspicious turtle poaching and trafficking on the surface, deep, and dark web. This multiplatform AI tool would equip law enforcement and conservation agencies with valuable insights into trafficking patterns, collate keywords and trading terms used to market endangered species, identify high activity selling networks, and enable generation of geographic heatmaps of selling activity. This intelligence will be translated into a customized dashboard tool that can enhance turtle conservation through reduction in poaching and selling activities for endangered species that are now proliferating via online platforms.





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Winner for Promotion of Wildlife Conservation

Merging Trends in Media and Mobile Gaming with a Non-Profit Framework to Advance Real-World Conservation Exposure, Engagement, and Action

By Mike Ellis, Doctoral Candidate Tulane University

The idea in this submission is focused on developing a science-based mobile game that harnesses current entertainment and philanthropic trends. Further, this innovative game promotes environmental literacy and engages broad audiences while still being not-for-profit. The mobile game could expand awareness and understanding of general audiences that lack knowledge of the importance of conservation of our natural world. The not-for-profit framework of the game is innovative in that it has the potential to generate revenue from ad views and microtransactions that engage viewers and encourage them to support meaningful conservation causes. Implementation of this tool could educate users about science and provide much needed financial support to conservation projects.



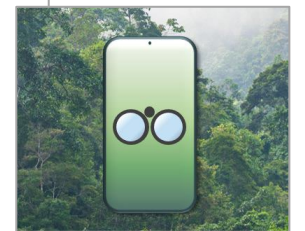
SCIENCE-BASED

Entirely drawn from
real-world wildlife
data and
distributions



EMPOWERING

Users contribute
directly to
conservation, which
benefits all parties





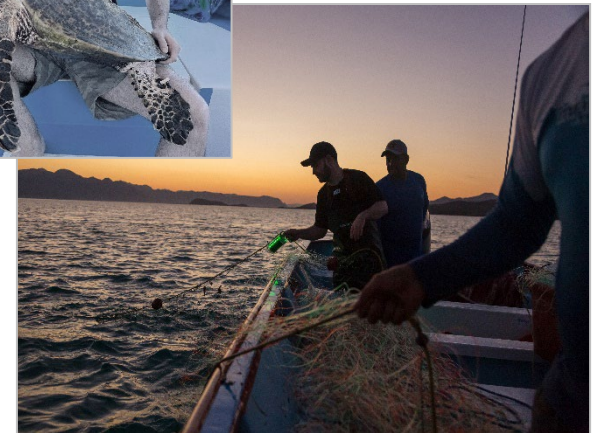
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Winner for Promotion of Wildlife Conservation

Harnessing Solar Energy to Reduce Marine Megafauna Bycatch While Maintaining Coastal Livelihoods

By Jesse Senko, Ph.D., Assistant Research professor, Arizona State University

The idea in this submission is to develop a solar light that doubles as a buoy to reduce incidental capture (i.e., bycatch) of endangered marine megafauna while maintaining target fish catch by illuminating gillnets. This innovation provides a seamless technology integration of the lighted buoy into existing fishing gear at an affordable cost. The buoy can remain illuminated for approximately one week without sunlight and run for several years without changing batteries. Wide implementation of this tool could preserve the livelihoods of coastal fishers in a resilient ecosystem while encouraging marine megafauna conservation.



NFWF



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Winner for Protection of Endangered Species

Hot Water Apparatus for Pesticide-Free Control of Fire Ants Impacting Ground Nesting Wildlife By Joshua King, Ph.D., University of Central Florida

This submission describes a non-toxic control system for fire ants that can protect ground-nesting species. The tool utilizes a mobile trailer-based, hot water mounted apparatus that provides consistent temperature range and low pressure to directly control fire ant colonies without affecting nearby ground-nesting species. Wide implementation of this tool could increase survival of ground-nesting species by preventing fire ant colonies from displacing and damaging adults and hatchlings.





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2023 Honorable Mention



INNOVATIONS IN CONSERVATION



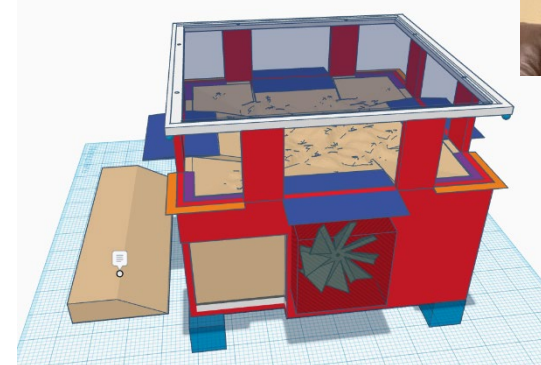
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GENIUS PRIZE

Honorable Mention for the Protection of Endangered Species

Floating Turtle Egg Protection Program

By Ravinder Arra, on behalf of Rishith and Arvith Arra

The idea in this submission is an engineered design for a floating turtle egg protection platform. The judging panel determined that this innovation might be helpful in some areas to increase turtle and other hatchling survival. However, more consideration for the biological requirements of the target species that it is intended to benefit is needed.





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Honorable Mention for the Promotion of Nonlethal Human-Wildlife Conflict

Artificial Intelligence to Virtual Reality- Utilizing Technology for Coexistence

By Sahra Mohamed

The idea in this submission is a conceptual program that incentivizes agroecosystems to reduce pesticide and fertilizer use through artificial intelligence (AI) monitoring of a mobile robot equipped with cameras and microphones. This level of monitoring has the potential to offer real-time insect monitoring by capturing visual and auditory inputs.

This device can effectively categorize and count insects using established machine-learning models. Additionally, to inspire an appreciation of biodiversity and insect coexistence, a school educational program would be developed. This program would incorporate data collected from local areas captured by the device into a virtual reality module to provide students accessible context to foster deeper appreciation. This innovation supports a holistic understanding of insect populations' distribution patterns.

