

UrbanWild: Wildlife Tracking in Urban Areas

PRD

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Problem Statement

As human development spreads, urban wildlife often comes into conflict with people, usually to the detriment of the urban wildlife population.

Examples include

- Mountain lions trying to find a mate or new territory being struck and killed crossing the Los Angeles freeway system.
- Neighbors posting panicked messages about coyotes on social media apps, leading to city decisions to eradicate them.
- Bears being euthanized for being habituated to humans.

Goal

Reduce human-wildlife conflict and support urban wildlife conservation.

Solution: UrbanWild

UrbanWild is a platform that uses a combination of machine learning and data sources to help improve our understanding of urban wildlife populations and the interactions between humans and wildlife in urban environments.

UrbanWild is intended to be used by government agencies, urban planners and policymakers, conservation groups, and researchers.

Solution: UrbanWild

- **Machine learning-powered animal identification**
UrbanWild uses machine learning to accurately identify and count animals in photos and videos from public cameras, allowing it to quickly and easily catalog the types and numbers of animals present in urban locations.
- **Mapping and visualization of urban wildlife populations**
UrbanWild maps the locations of identified animals and visualizes the data in an intuitive and easy-to-understand format. Users can see the distribution of urban wildlife in an area and identify potential hotspots for conservation efforts or interventions.

Solution: UrbanWild

- **Comparison to human development data**
UrbanWild compares the locations and movements of urban wildlife populations to the developments of human populations (population density, road/highway construction, housing, etc). Users can see how the two populations interact and gain provide valuable insights.
- **User-defined insights and analysis**
UrbanWild allows users to select specific animals or locations to analyze, providing focused and detailed insights. Users gain a better understanding of the interactions between humans and urban wildlife in specific areas by generating maps, charts, and other graphics to aid in visualization.

Competitors & Opportunity

- The use of AI to identify wildlife is not new, but it is not a tool widely used in urban environments. In general, AI is used for very specific conservation purposes, such as seabird conservation, wildlife monitoring in remote locations, or poaching detection.
- UrbanWild is a B2B or B2G solution monetized through government, state, and local contracts. Through its use of ML, UW will be able to significantly reduce costs and streamline the creation of timely, accurate insights.
- UrbanWild will be in a unique position to leverage existing urban monitoring systems such as public surveillance cameras, traffic cameras, and cloud-based external home security cameras (e.g., Ring).

Sample Use Cases

- **Wildlife Corridors:** More efficiently determine where to place a wildlife corridor. Streamlining this aspect of the project could save millions of taxpayer funds.
- **Designing and Preserving Greenways:** Determine where a proposed development might significantly impact local animal populations or where existing green space is critical to animal populations, for the purpose of influencing development in those areas.
- **Tolerant Coexistence:** Identify locations where there is a significant overlap between humans and urban wildlife in order to educate/intervene. Ex. determining where locking garbage cans should be deployed, or where/what type of fencing should be used.
- **Population Monitoring:** Identify shifts within animal populations in urban areas.



Mission

Reduce human-wildlife conflict and support urban wildlife conservation by providing timely, critical information about urban wildlife populations.
