code for <good> 2024

A Tech for Social Good program

Organization: The Shola Trust
Website: https://www.thesholatrust.org/

Mission

The Shola Trust is a non-profit, Charitable Trust involved in human inclusive nature conservation in the Nilgiri region of South India. The Sholas are a unique forest type, endemic to the southern part of the western ghats, and were the inspiration for us to start this organization, hence the name.

Context

Currently, there is more than 2000 sq km of Lantana in India. The Shola Trust aims to not only assist in the lantana removal but also create an ecosystem around it that could upskill local laborers to contribute lantana products to the private sector for livelihood.
Lantana elephants represent the journey of the organization and the vision of the project. While these elephants don't solve the problem, The Shola trust has managed to create an ecosystem for its production and enablement.

Objective:
Their plan is to create an ecosystem around the use of Lantana including:

- Innovation around large-scale lantana removal - shred it and use it for biomass industry leveraging the indigenous communities, since the forest belongs to them.
- Create handiworks like elephants and other animals etc.

They work with forest officials to identify the locations with Lantana to cut, collect, pulverize and use. The tracking of all the tasks is currently manual.

Challenge

Innovate to Conserve: Develop a comprehensive solution to automate the identification, removal, use and monitoring of the restoration process in the Shola forests.

The solution should also help the organization keep up with the demand of the production of lantana elephants and automate the tracking of the manufacturing process with provision for insights into the optimal load management, resource allocation and performance of each unit so that the organization can make informed decisions.

Additional Considerations

- Enable other organizations willing to partner with them to use this information and technology.
- Can there exist an efficient way to tag lantana locations and the process using IoT devices, even in areas without internet access?
- Collecting and storing data on Lantana presence and removal operations offline, with seamless synchronization when internet connectivity is restored.
- Can the data collected be leveraged to generate reports that would help the organization make more informed decisions?