Mirchandani Technologies

Transforming Agriculture With AI Intelligence

This project develops an AI-driven agricultural intelligence system that analyzes satellite, drone, and mobile imagery to monitor crop health and detect pests early. By using vegetation indices and predictive models, it provides actionable insights to reduce losses and promote sustainable farming.

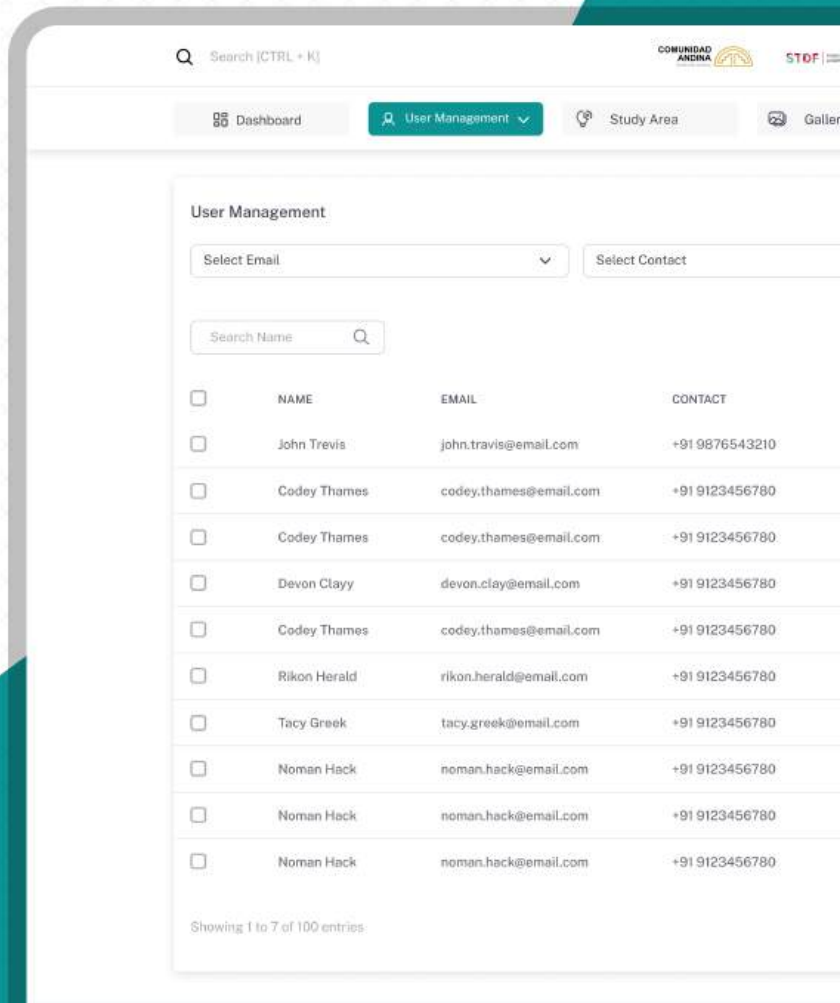
Project Requirements

Create an early warning system for pest threats across multiple countries

Process real-time data from satellites, drones, weather sources, and field reports

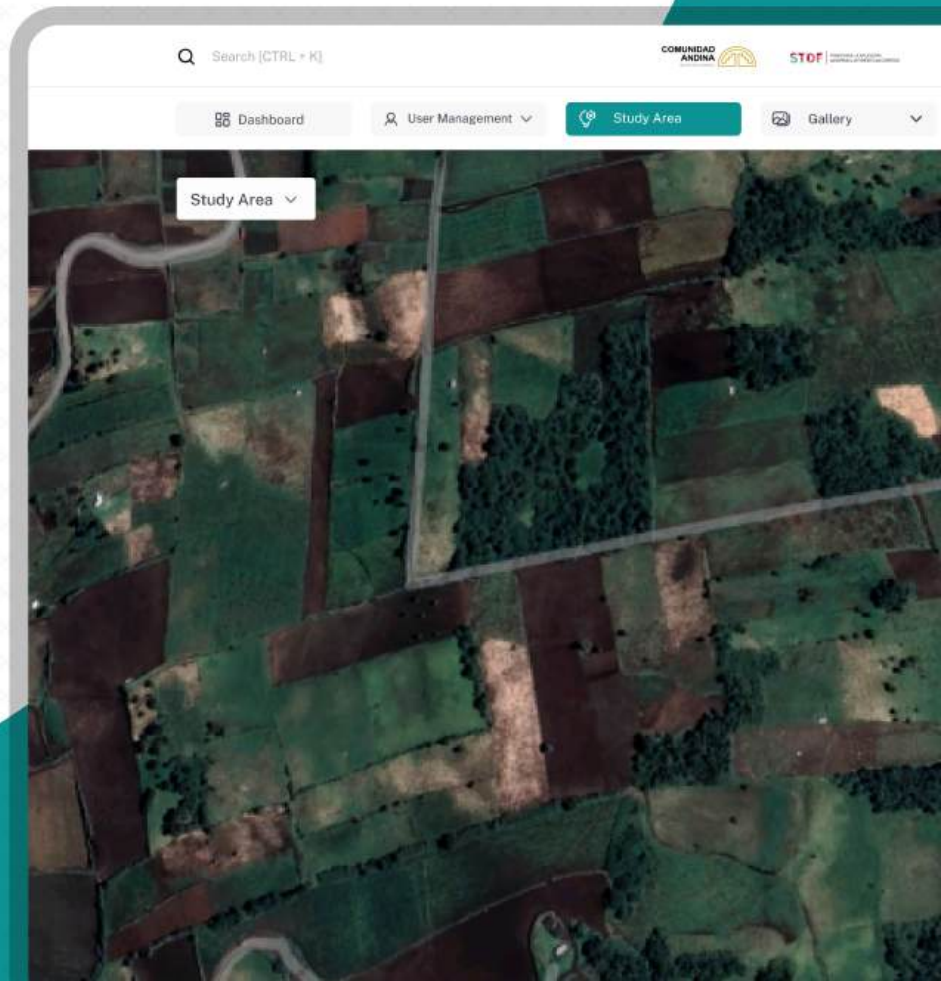
Operate as a unified platform across regions with different data standards

Enable field workers and farmers to capture crop images for instant analysis



Challenges Faced

1. Inconsistent agricultural data across regions and countries
2. Slow manual detection processes causing delayed responses to pest outbreaks
3. Limited cross-border collaboration between agricultural authorities
4. Large-scale monitoring complexity across vast farming areas
5. Technology gaps in rural and low-infrastructure regions



Solution

Smart computer vision system for automated pest identification

Multi-source data integration combining satellite, drone, weather, and field data

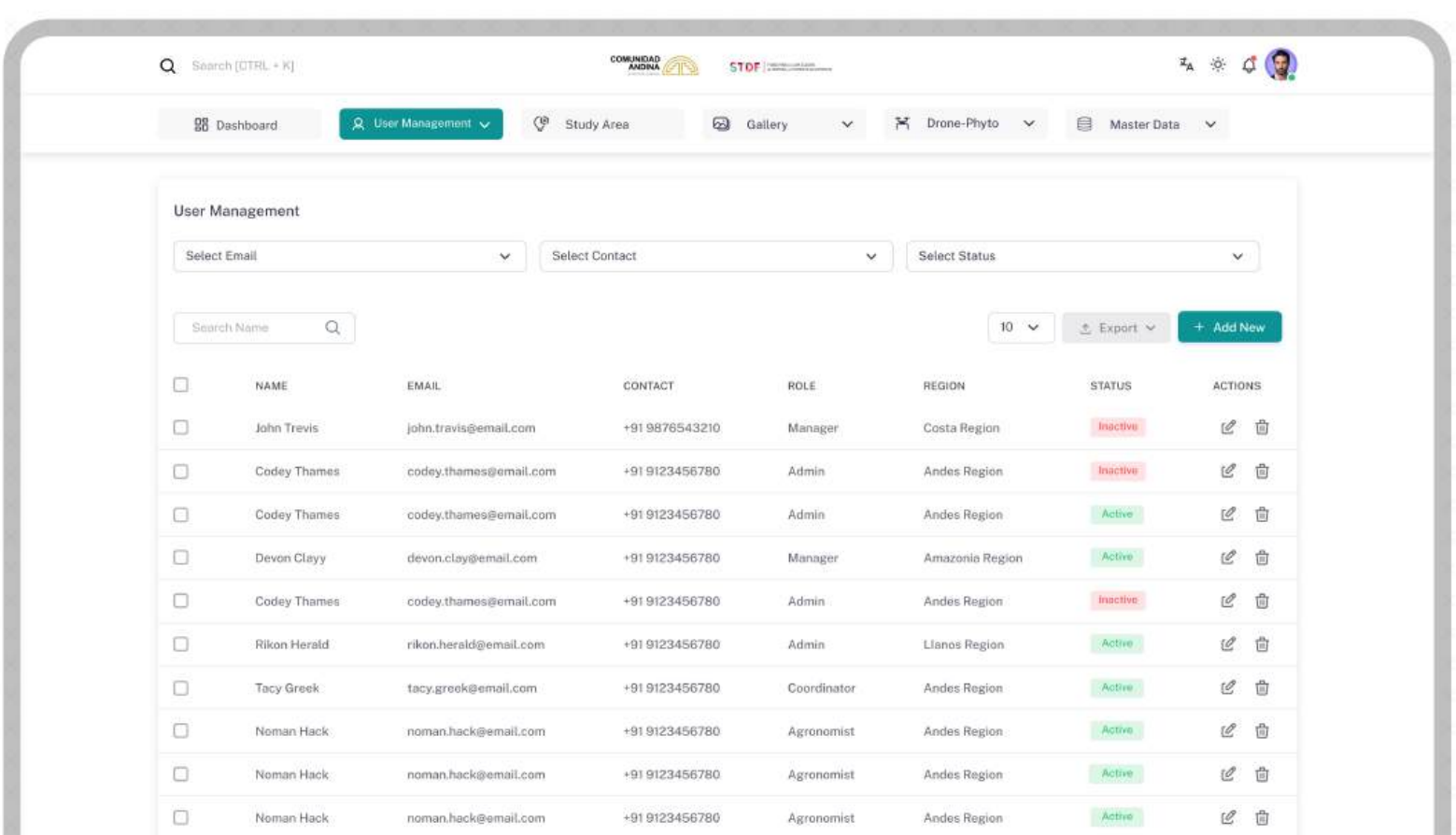
Predictive analytics engine to forecast pest outbreaks using historical patterns

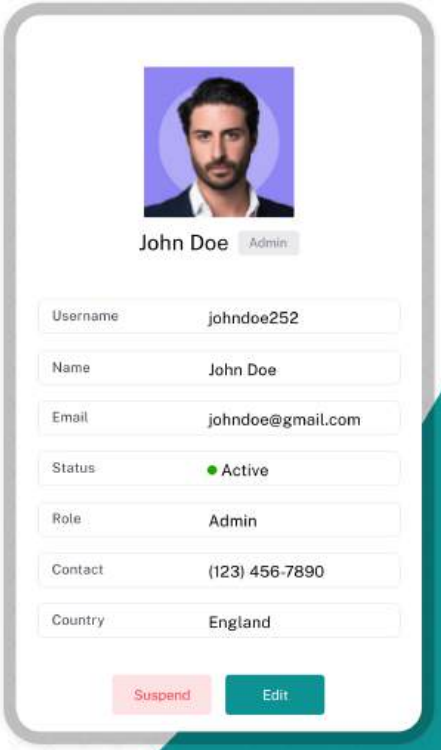
Centralized intelligence hub enabling regional coordination and decision-making

Cross-platform mobile access for instant field reporting and image capture

Results & Impacts

- Selected from 100+ competing companies for a large regional initiative
- 93%+ accuracy in pest detection using advanced machine learning models
- Early pest detection enabling preventive action and reduced crop losses
- Faster, data-driven decision-making for agricultural authorities
- Improved regional collaboration through a unified intelligence platform
- Enhanced food security and support for sustainable farming practices





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