



Action Prediction of Wild Elephants Using Vision Based Deep Learning

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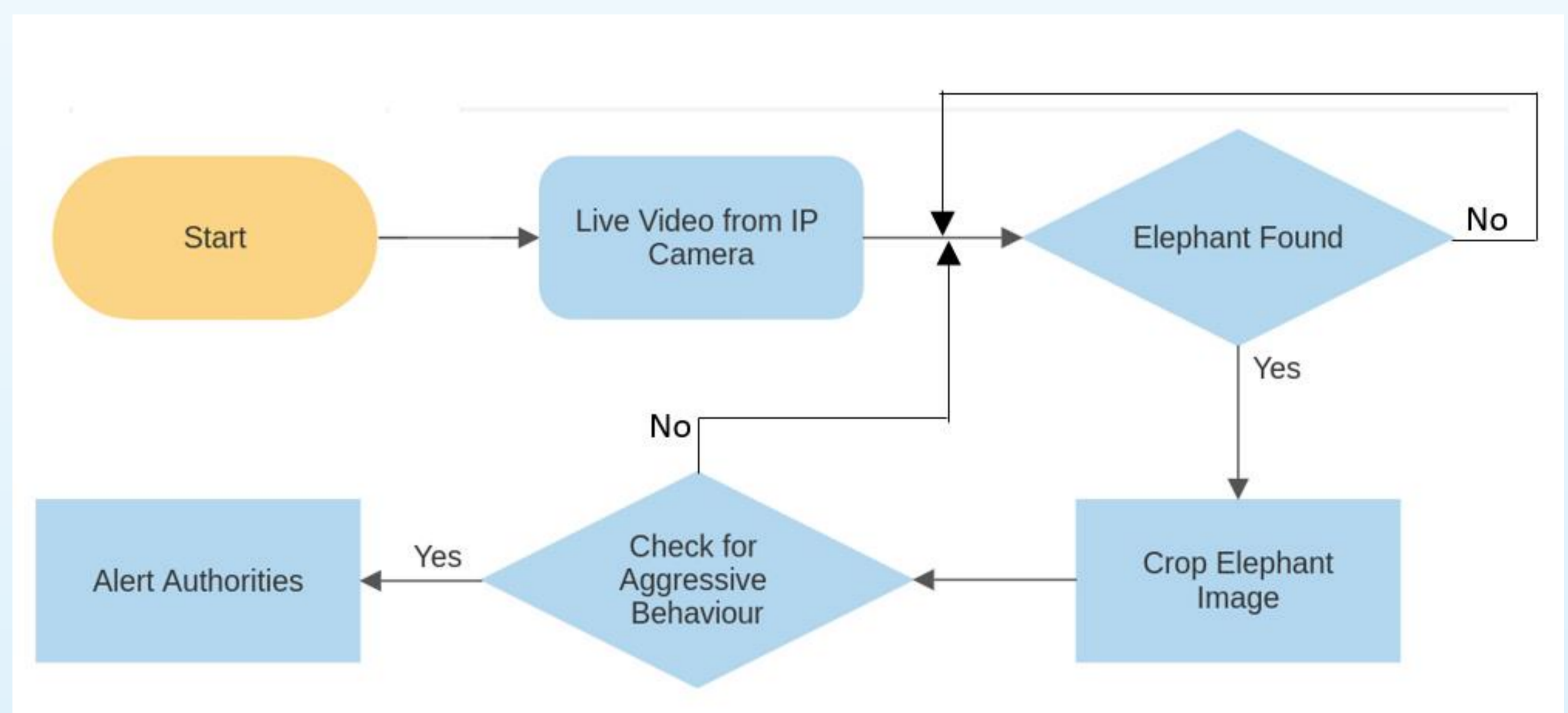
Abstract- Our system uses Vision-Based Deep Learning to detect elephants and classify aggressive behaviors, alerting in real time. This technology promotes coexistence and wildlife conservation by providing early warnings for human-elephant conflicts.

Introduction

In regions of human-elephant cohabitation, our Elephant Detection System, powered by Vision-Based Deep Learning, addresses escalating conflicts. As human settlements encroach on traditional elephant habitats, incidents surge, endangering lives and ecosystems. Our study pioneers an automated approach for elephant detection, specifically classifying 'Aggressive Tail' and 'Aggressive Ear' actions. Leveraging cutting-edge deep learning techniques, our system provides real-time early warnings, fostering harmonious coexistence, preserving wildlife, and significantly reducing human-elephant conflicts.

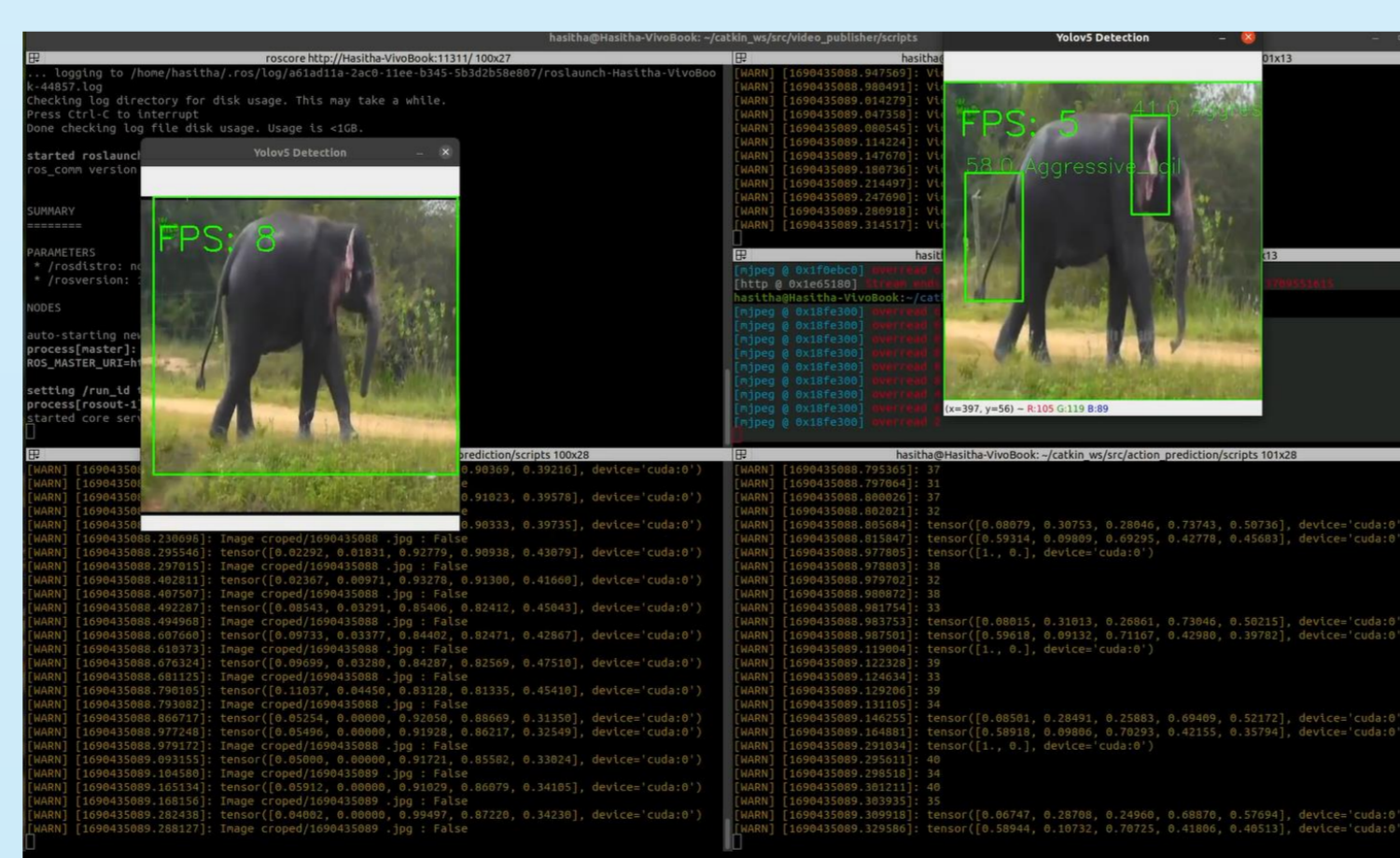
Methodology

1. Live Video Capture
2. Elephant Detection
3. Elephant Image Cropping
4. Aggressive Behavior Analysis
5. Real-Time Alerts
6. Data Logging
7. Continuous Monitoring

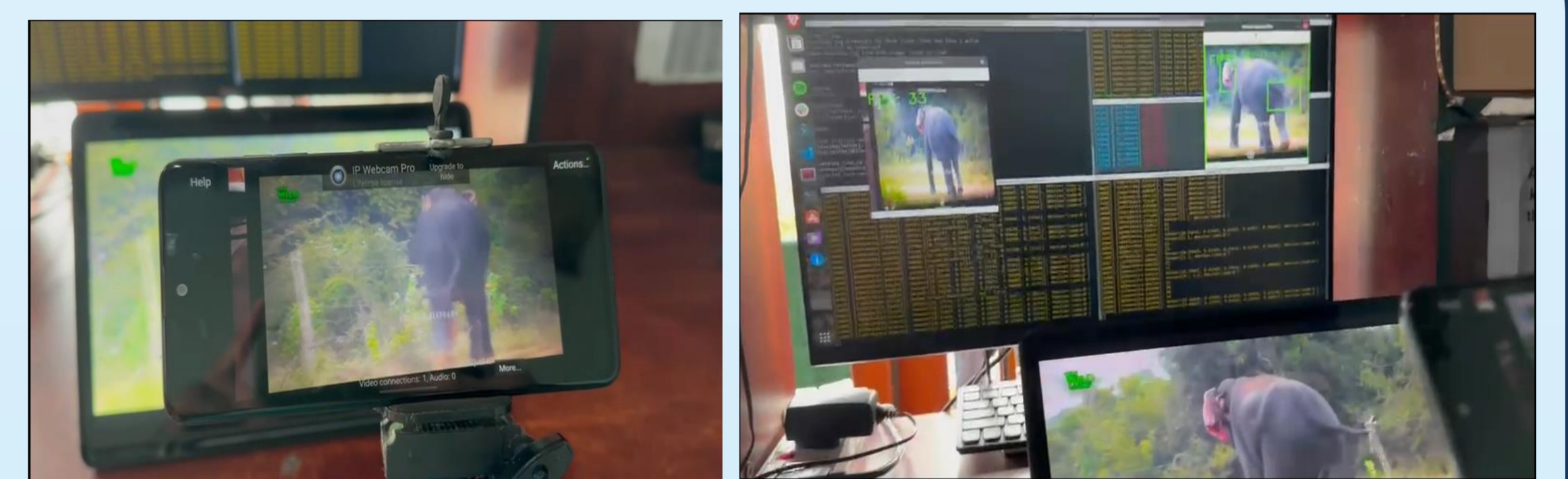


Results

Our algorithm excelled at detecting 'Aggressive Tail' and 'Aggressive Ear' behaviors in elephant herds, achieving high accuracy. Real-time predictions had minimal latency, offering promise for conflict mitigation and coexistence, despite challenges in poor lighting scenarios



Model Simulation



Model was simulated and tested. Gives accurate results and detection progress has good accuracy

Conclusion

In conclusion, our predictive algorithm holds promise to reduce human-elephant conflicts, emphasizing interdisciplinary collaboration and technology for coexistence.

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