

Non Visual Snake Detection: AI Recognition of Python Thermal Profile

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This project was designed to tackle the growing problem of the invasive Burmese Python in the Florida Everglades. Since these snakes are hard to find, standard hunting methods did not work well. The main goal was to discover a smart, new system that could continuously find the snakes in many different scenarios and conditions. To do this, our team built an innovative device using a night-vision camera, connected to a small computer (Raspberry Pi), running our own AI recognition software. We tested the system indoors using our school's mascot, a live Burmese Python, collecting many pictures under different conditions (day/night environments). The AI was trained to recognize the python's patterns and signature look, reaching a high accuracy of 99.5% when the snake was ten feet away in the dark. These results showed that the system could effectively spot pythons at night or in places with poor visibility, making it a valuable tool for those preserving the national park. However, because the testing was done only indoors, future work needs to confirm how well it works in the real, wild Everglades.

Awards Won:

