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(57) Abstract :

The invention discloses an AI-based platform for smart wildlife habitat management, integrating IoT sensor network (101), satellite imaging module (102), AI analytics engine (103), predictive habitat modeling unit (104), threat detection and alert system (105), conservation management dashboard (106), and cloud data repository (107). The system provides real-time monitoring, predictive analysis, and actionable insights for proactive habitat conservation. It enhances decision-making, supports biodiversity protection, and addresses ecological threats through automated detection, predictive forecasting, and collaborative data sharing, ensuring sustainable management of wildlife ecosystems.

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