chakravyuh 1.0

TEAM **GUARD-X**

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THE PROBLEM

Sky Shield – Future Drone Warfare (GITACVPS005)

Design of Futuristic defence drone systems that can perceive, decide and act intelligently in modern and future warfare scenarios and design innovative architectures, algorithms, or operational strategies that address challenges

Conventional large-scale drones compromise mission stealth .

Vulnerable to enemy interception, posing risks of detection or disruption.

Dependence on manual monitoring escalates manpower demands and exposes soldiers to elevated risks.

THE SOLUTION

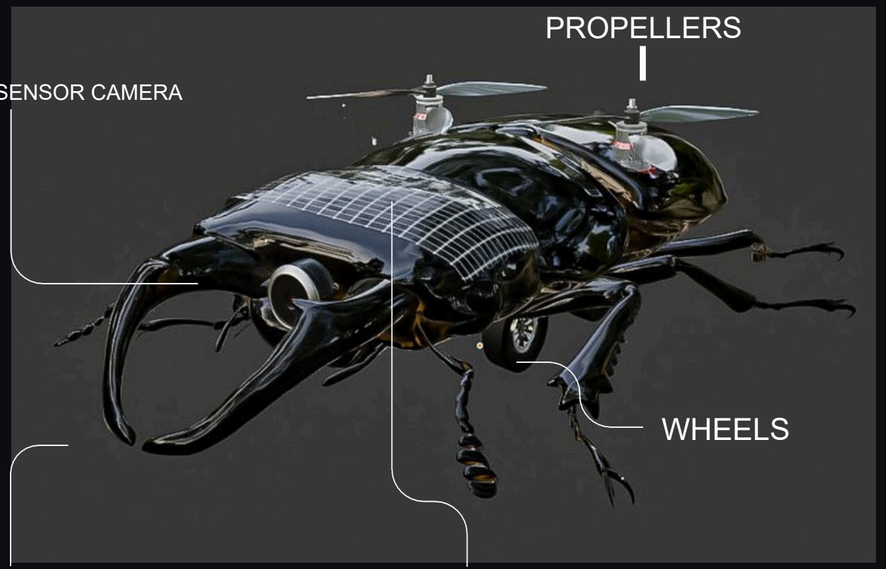
A compact, intelligent, and covert AI-powered surveillance solution that proactively detects unusual human activities in high-risk zones—anticipatory, vigilant, and discrete yet immensely impactful.

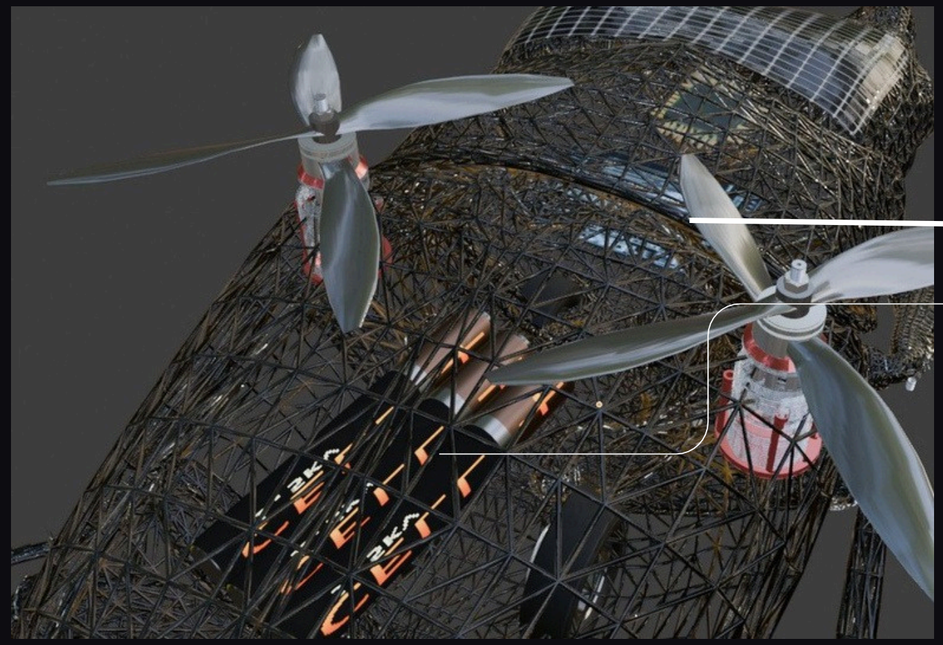
Uses an ML model to detect the unusual and unauthorize human activities that deals with real time data

Swarm deployment covers a large geographical area and access

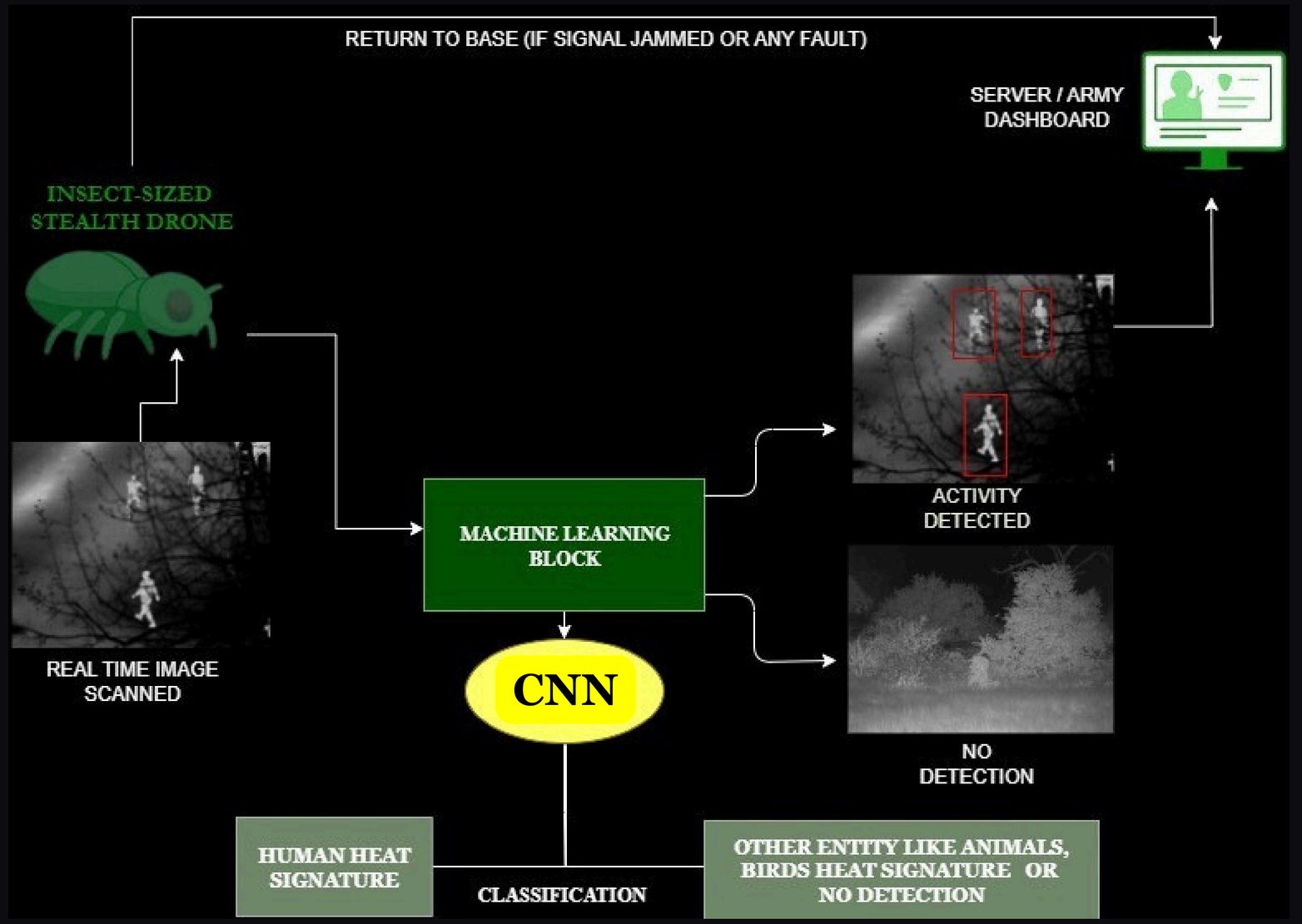
Deals with urgent requirement for a compact, intelligent surveillance solution designed to operate covertly in high-risk environments.

DEMO PROTOTYPE

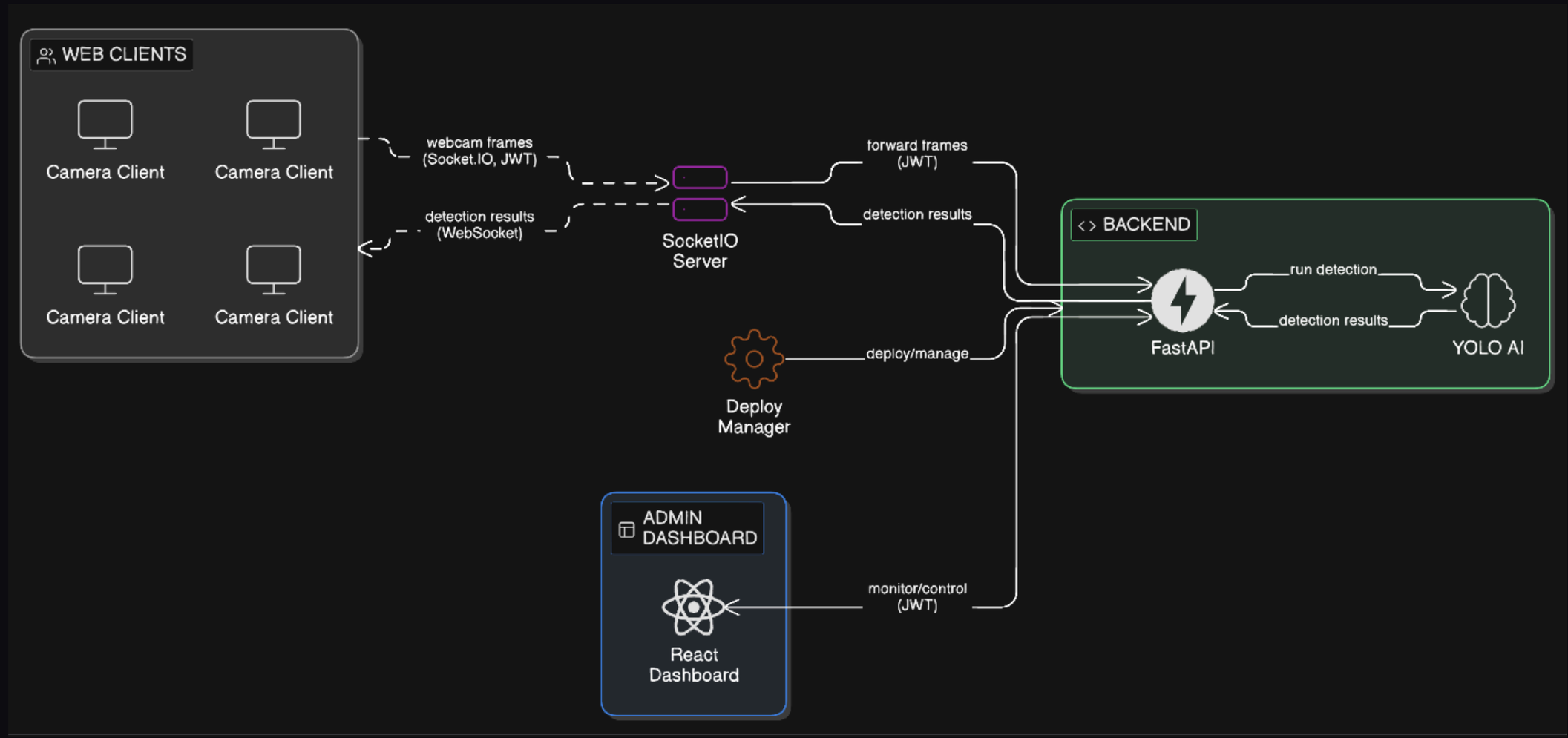




PROCESS FLOWCHART



ARCHITECTURE DIAGRAM



IMPACT AND BENEFITS

Border Security :-

Covert drone scan patrol the India–Pakistan and India–China borders, detecting unusual movements and preventing infiltration attempts.

Counter-Terrorism :-

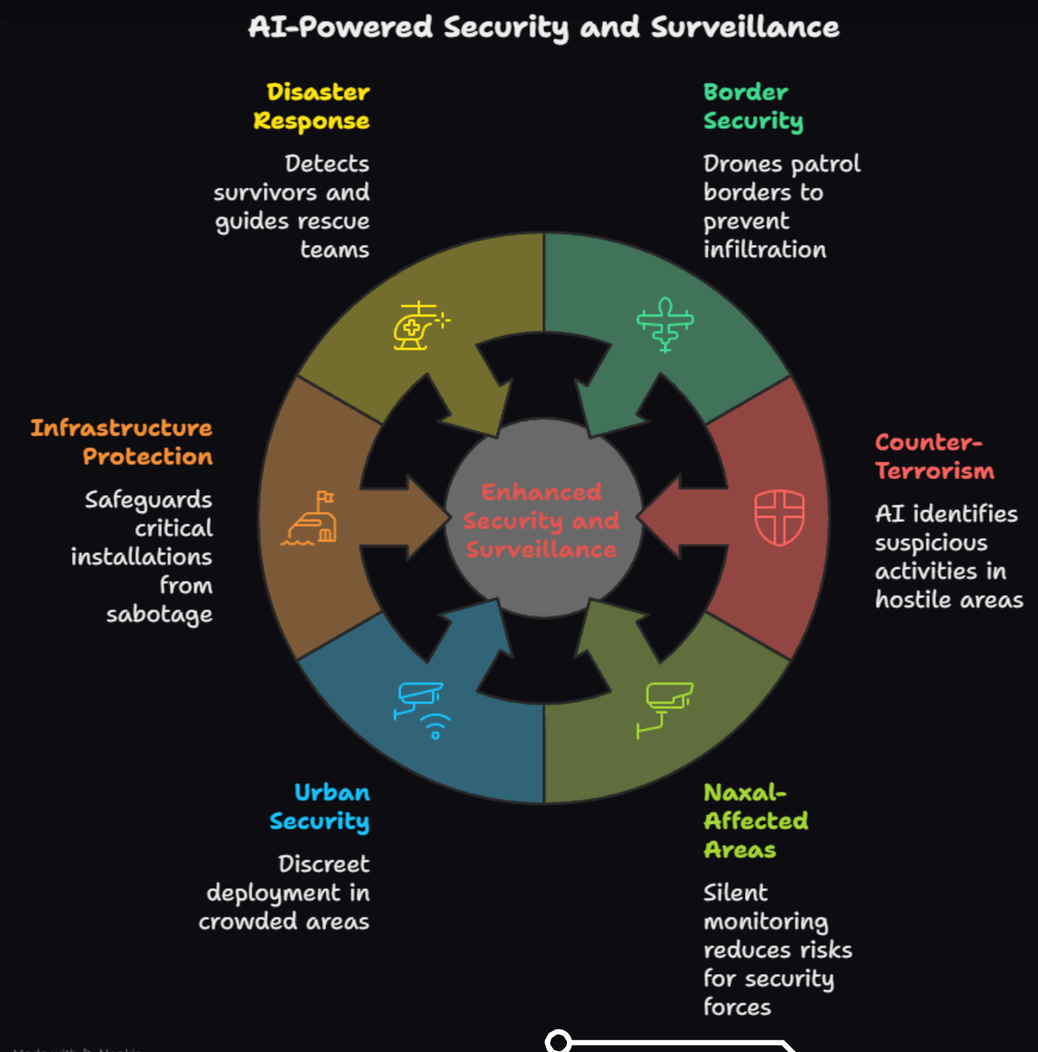
AI surveillance aids operations in Jammu &Kashmir by identifying suspicious activities in hostile or densely populated zones.

Naxal-Affected Areas :-

Provides silentmonitoring inChhattisgarh, Jharkhand, and Odisha, reducing risks for CRPF and state forces during anti-insurgency missions.

Disaster Response & Rescue :-

Infloodsor earthquakes (e.g., Assam floods, Uttarakhand disasters), AI-powered drones can detect trapped survivors discreetly and guide rescue teams.

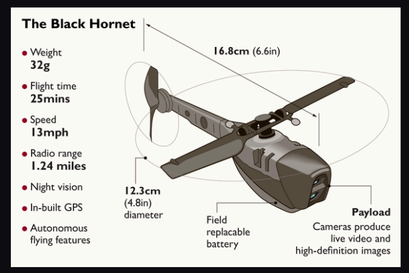


BUSINESS MODEL

CONVENTIONAL/EXISTING DRONES

HIGH COST OF EXISTING DRONES

MULTIPLE SYSTEM REQUIRED FOR DIFFERENT MISSIONS



OUR SYSTEM

CHEAP AND SUSTAINABLE

APPROX. COST OF OUR DRONES: 30K-35K

OUR APPROACHES

ARMY AIR DEFENCE CENTER

ATC(AIR TRAFFIC CONTROLLER)

MINISTRY OF HOME AFFAIRS (NDRF)

FUTURE SCOPE AND CONCLUSION

SWARM DEPLOYMENT: HUGE NUMBER OF DEPLOYMENT FOR LARGER SCALABILITY

ANTI JAMMER SYSTEM: CAN BE IMPLEMENTED IN VARIOUS TERRAIN DEPENDING UPON THE SITUATION

RTB MODEL: WE'LL PREPARE A RETURN TO BASE MODEL SO THAT IF SC FAULT OCCURS IT CAN BE DESIGNED IN SUCH A WAY THAT WILL RETURN TO HOME BASE

GUIDING
UNSEEN
AUTONOMOUS

RELIABLE

DEFENCE

THANK YOU

JAI HIND