DESIGNING THE FUTURE OF OPERATIONS: JARVIS, AN AI CO-PILOT FOR DRONE FLEET COMMAND

This is a 10-day design sprint exploring "The Future of Human-AI Collaboration" applied to FlytBase's autonomous drone platform. FlytBase's one-to-many fleet operation dashboard enables managing up to 30 drones from a single interface—creating significant cognitive overload when one pilot must monitor multiple drones simultaneously. I designed "Jarvis," a proactive AI co-pilot that uses Generative UI and AI-first interaction patterns to transform FlytBase's command interface from a reactive data wall into an intelligent collaborative partner, reducing pilot workload while maintaining operational control.

CHALLENGE :

Sprint Focus : Future of Human-AI Collaboration
Platform : FlytBase Autonomous Drone Operations
Problem : Cognitive overload in 1-to-30 drone fleet management

ROLE	TIMELINE	TOOLS
UI/UX Designer	10-Day Sprint	Figma

THE PROBLEM

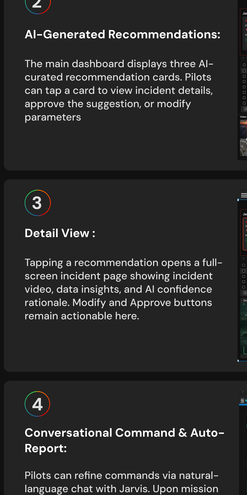
Enterprise drone platforms like FlytBase support managing up to 30 drones from a single dashboard, promising major efficiency gains. However, while the app can handle 30 drones, a pilot typically oversees multiple drones simultaneously, creating significant cognitive overload—data-dense dashboards lead to missed alerts, slowed responses, and increased error risk. The current interface is reactive, placing the entire analysis burden on the pilot.

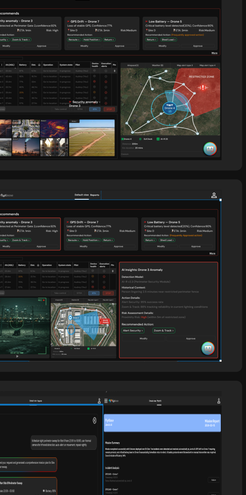
THE VISION

AI-First Interaction: Pilots collaborate with an intelligent system that anticipates needs.
Generative UI: The interface dynamically reconfigures in real time based on context and critical events.

THE PROCESS: A 10-DAY DESIGN SPRINT

Day 1–4: Understanding & Sketching — Secondary research into cognitive load in multi-drone operations; Crazy 8s sketches to explore dashboard concepts.
Day 5–10: Prototyping & Validation — High-fidelity UI screens, Figma variants for interactions, and informal feedback sessions


Crazy 8s Sketch


Storyboard Image

THE SOLUTION: JARVIS, A HUMAN-AI PARTNERSHIP

1

Proactive Triage ("Morning Brief"):

On login, "Morning Brief" surfaces top alerts (anomalies, low battery, connectivity) for immediate pilot awareness.

2

AI-Generated Recommendations:

The main dashboard displays three AI-curated recommendation cards. Pilots can tap a card to view incident details, approve the suggestion, or modify parameters

3

Detail View :

Tapping a recommendation opens a full-screen incident page showing incident video, data insights, and AI confidence rationale. Modify and Approve buttons remain actionable here.

4

Conversational Command & Auto-Report:

Pilots can refine commands via natural-language chat with Jarvis. Upon mission completion, Jarvis generates a post-mission report summary.

INTERACTIVE PROTOTYPE

The Video View

The Figma Prototype

REFLECTIONS & NEXT STEPS

This sprint confirmed that designing for complex systems demands an AI-first mindset rather than feature overload. Next steps include usability testing with professional drone pilots to validate adaptive UI efficacy under high-stress scenarios.