Jarvis — The AI Co-Pilot for Drone Fleet Operations

Challenge: Explore AI-first and generative UI design to enhance FlyBase's autonomous drone platform
Deliverables: Research Insights , UI , Wireframes , Prototype .

Jarvis is an AI-powered co-pilot that helps pilots manage multiple drones efficiently, reduce cognitive overload, and make smarter decisions in real time.

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

Challenges

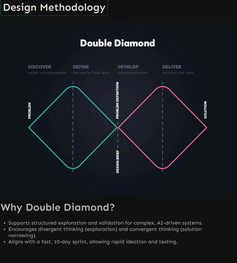
- The current FlyBase dashboard for multi-drone operations creates cognitive overload for pilots managing multiple drones.
- The interface is reactive and data-heavy, requiring pilots to manually process all alerts and information.
- Pilots have limited support for real-time decision-making and prioritization of critical events.

Goals & Metrics

I worked independently as a UI/UX designer to design jarvis, an AI co-pilot for FlyBase, aiming to:

- Transform the dashboard into a proactive, AI-assisted interface that highlights critical events and recommendations.
- Reduce pilot cognitive load while maintaining full operational control.
- Provide clear AI-generated recommendations with actionable options (approve, modify, override).
- Support natural language interaction for mission commands and automated reporting.
- Improve situational awareness and decision-making efficiency for pilots managing multiple drones.
- Build high-fidelity prototypes, wireframes, and interactive flows to validate design solutions with stakeholders.

Design Methodology



Why Double Diamond?

- Supports structured exploration and validation for complex, AI-driven systems.
- Encourages divergent thinking (exploration) and convergent thinking (solution narrowing).
- Aligns with a fast, 10-day sprint, allowing rapid ideation and testing.

10-Day Sprint Timeline

Discover	Define	Develop	Deliver
Day 1-2	Day 3-4	Day 5-7	Day 8-10
Secondary Research User Pain Points Workflow Analysis	Problem Framing Design Principles	Wireframes UI Concepts UI Screens	Prototype Presentation

Discover

- Secondary research on cognitive overload in multi-drone operations
- Workflow mapping and pilot task analysis
- Exploration of AI-first interaction patterns
- Exploration of Generative UI concepts
- Key insight: Pilots need assistance, not more data

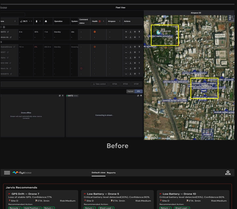
Define

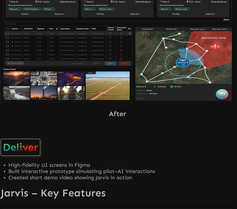
- Synthesized insights into problem statement:
  "How might we design an AI-first Interface that proactively supports pilots managing multiple drones?"
- Selected jarvis concept to move forward

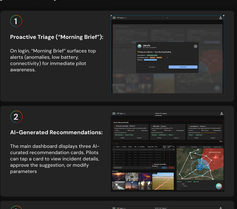
Develop

- Created low-fidelity wireframes to visualize flows and AI-first Interactions
- Designed Before & After screens: reactive dashboard → proactive AI co-pilot interface
- Defined AI recommendation cards, incident detail view, and conversational command flow

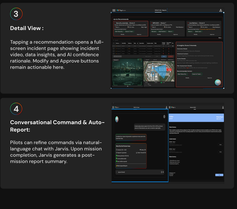
Wireframes



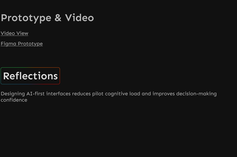




Before & After Screens



Before



After

Deliver

- High-fidelity UI screens in Figma
- Built interactive prototype simulating pilot-AI interactions
- Created short demo video showing jarvis in action

Jarvis – Key Features

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.

Prototype & Video

Video View

Figma Prototype

Reflections

Designing AI-First Interfaces reduces pilot cognitive load and improves decision-making confidence