

Catalyst AI EcoSystem

enables users and enterprises to run powerful AI completely offline, keeping all data private and under their control.

City: Guntur

State: Andhara Pradesh

Sector: Deep Tech

Problem Solution Fit

Problem

Today's AI systems are centralized personal and professional data is constantly uploaded to third-party servers. This creates massive **privacy, security, and ownership risks**, especially in sectors handling sensitive data like healthcare, law, and governance. It can't run offline, and lock users into proprietary ecosystems.

- **Current Pain Points**
- Data stored and processed in external clouds, risking leaks.
- Users have no control or visibility over how AI uses their data.
- AI assistants assume information instead of adapting to the individual.
- Internet dependency & low rural accessibility.

Why This Matters

- 70% of global users express privacy concerns with AI systems.
- 80% of AI inference will move to edge devices by 2027.
- India's AI market will exceed \$20B by 2026, with growing demand for secure local AI.
- Data localization and privacy laws are accelerating the need for decentralized AI.

Problem Solution Fit

Solution

Catalyst decentralizes AI through **Fog & Edge computing**, enabling intelligence to run **directly on the user's device** or **within local networks**.

Key Features & Benefits:

- Fully **offline AI operation** with very less cloud dependency.
- **Learns only from user-provided data** (no assumptions or external datasets).
- **Data resides near the user** , even Catalyst as a company can't access it.
- Works across devices through **local sync and edge nodes**.
- Adaptive, secure, and context-aware intelligence for personal and enterprise use.
- **Unique Value Proposition:**
- A **decentralized, privacy-first AI ecosystem** that belongs to the user — accurate, personal, and completely offline.

Technology & Innovation

Technology

- **Hardware:** Catalyst RD1 Device — Qualcomm Edge SoC, LPDDR5 RAM, UFS 3.1 Storage, E-Ink Display.
- **AI Stack:** Quantized Local LLMs (Llama 3.2, SmolLM2), ONNX Runtime, TensorRT.
- **Software:** Catalyst OS + SDK for local model control and edge deployment.
- **Security:** Encrypted local storage; peer-to-peer Fog sync; zero external data flow.

Innovation Differentiators

- AI that **runs entirely offline**, learns privately, and self-optimizes locally.
- Predicts only from **user inputs** — no preloaded bias or assumption.
- Modular **Fog + Edge architecture** for scalable deployment.
- **Zero-interface concept** — AI acts as the interface itself, generating task-based UIs on demand.

Technology & Innovation

Scalability Roadmap

- **Phase 1:** Launch Catalyst AI Software Suite (SaaS).
- **Phase 2:** OEM integration with enterprise and third-party devices.
- **Phase 3:** Launch Catalyst RD1 Hardware for consumers.

Competitive Advantage

- Cloud-free operation → unmatched privacy and uptime.
- User-owned data → total control and compliance with privacy laws.
- Edge-based architecture → low latency and higher security.

Market Opportunity & Scalability

Segment	Growth (CAGR)	Opportunity
Edge AI Hardware	24%	\$70B+
AI Privacy Tools	30%	\$18B+
Indian Consumer Tech	11%	\$125B by 2026

Industry Trends

- Rapid shift to on-device AI for privacy and efficiency.
- Global movement toward decentralized and regulatory-compliant data models.

Market Opportunity & Scalability

- ***Competitor Snapshot***

Competitor	Model	Limitation
Rabbit R1	Cloud-based AI device	Internet required
Humane AI Pin	Cloud-dependent OS	Privacy concerns
Catalyst RD1	Offline Edge AI	Fully local, user-owned data

Business Model

Model	Description	Revenue Stream
SaaS	Catalyst AI Suite for individuals & developers	Subscriptions
OEM / White Label	Integration with partner devices	Licensing Fees
IaaS	Private AI infrastructure for enterprises	Edge deployment & service contracts

Customer Acquisition Strategy

- *B2C: Direct digital channels and community-based onboarding.*
- *B2B: Enterprise partnerships in healthcare, law, and education.*
- *OEM: Collaborations with hardware manufacturers.*

Target Customers

Enterprises, institutions, and privacy-conscious individuals seeking offline, personalized AI.

Founding Team

Chava Veera Bhadra Dheeraj (Founder & CEO)

Leads Operations and Business Strategy with a focus on decentralized AI ecosystems, Fog + Edge infrastructure, and next-generation product innovation.

Core Team:

Sasank P — AI Engineer & Device Designer (Tech Team Lead)

Specializes in AI model optimization and hardware design for Catalyst RD1 and enterprise systems.

Shanmukha Rishi & Mani Surya — AI Engineers (Tech Team)

Jointly responsible for model integration, adaptive learning systems, and secure local deployments.