CodeYogi | Smartphone led Skills Engine

About the Organization

- Section 8 non-profit by IIT alumni · 15+ yrs in deep tech, product, startups
- 6 yrs working on same problem. Self funded (Rs. 4 Cr+) for first 5 yrs
- **Mission:** Remove every limitation for underserved students on acquiring deep tech skills
- **For:** high-school and diploma students with no teacher guidance and no system provided compute infra (accessible computer labs, internet, tools subscriptions)
- **Scale:** 4.2 lakh students · 4,200+ institutions · 102 districts · 2,000+ villages
- **Backed by:** Nudge incubation · Delta + AWS accelerators · Rohini Nayyar Award 2026

Problem Statement (use case specific)

- Developing deep tech skills need: Access to knowledge + workspace + support on demand + evaluation + feedback.
    - All these traditionally require teachers and labs.
- Labs: Only 23% of Indian schools have one that works. [UP, MP, Bihar] <10%
- Mobile ed-tech stops at: Content + MCQs → **Only** builds **knowledge**, **not skill**
- So the system settles for digital literacy at best
- **Result: 180M+ students** in the bottom three quarter of socio-economic strata, **risk being completely left out** of their only chance to gain applied digital skills - only due to systemic inefficiencies.

AI Solution Description

- An end to end scalable solution to impart practical digital skills at scale, in vernacular languages aligning closely with government
- **Four AI end-to-end engines:** Deliver → Practise → Evaluate. No human in the loop.
- **Student flow [Deliver]:** WhatsApp Chatbot delivers lessons/assignments/reminder nudges → real tools on the phone → submit proof → AI grades work and provides feedback
- **Two programmes on same rail [Practice and Evaluate]:**
    - **AI Fluency:** Work assignments in dozens of real AI apps (Claude, NotebookLM, ElevenLabs, Flow, Replit, Lovable, Sarvam, etc) × on education, health, career, life → AI scores
    - **Coding:** mobile code editor → engine reads code as it's written → real-time feedback on quality → capture signals of depth

Tools and techniques Used

- Models: provider-agnostic routing (Gemini, OpenAI) → moving to AWS Bedrock for sovereignty
- Agents: LangChain.js + LangGraph.js · RAG on LanceDB · Zod-enforced outputs
- Infra: serverless AWS (Lambda, EventBridge, DynamoDB, S3) · Athena + natural-language layer

Key Features of tech solution

Built by a deep tech team and core-foundations set when self funded, every workflow is extreme cost and scale efficient

- **AI Evaluator & Support engine:** proof of work, not MCQs · token-efficient AI grader · **1M+ evaluations already executed** ≈ 12,000 teacher-days
- **AI Community Moderator:** 24×7 AI moderation across 1000s of peer groups
- **AI Reporting Engine:** auto-reports to officials + auto-prioritised support tickets + Supports natural language context relevant queries → support staff doesn't need to scale with partnerships
- **AI Org Brain:** one source of truth, wired to every data source and GitHub

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Impact (Qualitative and Quantitative)

- **Reach:** 4.2 lakh students · 49% girls
- **Evaluated work:** 1.6 lakh students with ≥1 AI-approved submission
- **Who:** 90% govt schools · 75% rural · 76% no home computer · 45% never touched one · 82% never taught a digital skill
- **Skill:** AI Fluency Index 38 → 64 /100 · 59% moved up ≥1 AI fluency band
- **Mindset:** limiting beliefs fell 1.38 → 0.82 · enabling rose 1.50 → 2.14 (of 4)
- **Divide:** bottom quarter moved from AI fluency index of 9 → 62 /100 on average · top–bottom diff in AI fluency reduced from 58 → 10 pts
- Multi order outcomes:
    - A richer and applied relationship with technology
    - Start using AI in their day to day lives across dimensions
    - 1000s of students building professional grade content, websites, tech solutions for their schools, local businesses, govt schemes, learning about same tech that's enabled big unicorns and building

Plan for roll-out and sustainability

- **Target:** 1M learners by Jun 2027 → 5M by 2029
- **Tailwind:** rides the government push on AI skills · existing district rapport = low friction
- **Funding:** philanthropy builds multi-state proof → state skilling budgets carry >40% by FY28

Cost of development and ongoing maintenance

- **₹90 / student / year** at 1M scale
- **AI runs engineering, content, reporting** → headcount scale as a much weaker function of scale [nearly flat]
- **Talent flywheel:** best students → hired → build the programme → positive feedback to entire value chain | Entire engineering + content team is our own alumni | It has mean age of just 19.5 years
- **Provider-agnostic** → aligned with big-tech AI-adoption missions, strong case for AI credits, our biggest cost at scale

Additional documents

- **Application presentation:** https://drive.google.com/file/d/1Is0agfap_dqMoDAOI8SkXSaZ7gYzNlmq/view?usp=sharing
- **Solution Demo Videos:** https://drive.google.com/file/d/1UfTkYnDEGSDWul6awkQvZ7Z3nrCzhr2Q/view?usp=sharing
- **User Testimonials:** https://drive.google.com/file/d/1lcG9HSJtNbwacPpNMKn0eVOzGD8EBLgo/view?usp=sharing

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