



CogniLearn Platform

Comprehensive Cost Analysis Report

All costs in Indian Rupees (INR) | Exchange Rate: 1 USD = ₹83



System Overview

- ✓ **Super Admin:** 1 (Platform Administrator)
- ✓ **Admins:** Per School (Multiple Schools Supported)
- ✓ **Teachers:** Per Admin (Multiple Teachers per School)
- ✓ **Students:** Per Admin/Teacher (Scalable to Unlimited)



Google Gemini API

AI Analytics, Question Generation, Chat, Recommendations



MongoDB Atlas

Database Storage & Operations



Server Hosting

Backend API + Frontend (Vercel/Railway)



File Storage

Videos, PDFs, Audio Files

Tier	Schools	Users	Gemini API	MongoDB	Storage	Hosting	Total/Month	Cost/User
Basic	1	100	₹1,660	₹0	₹0	₹0	₹1,660	₹16.60
Small	5	500	₹8,300	₹0	₹0	₹3,320	₹11,620	₹23.24
Medium	20	2,000	₹33,200	₹747	₹125	₹3,320	₹37,392	₹18.70
Large	50	5,000	₹83,000	₹4,731	₹291	₹16,600	₹104,622	₹20.92
Enterprise	100	10,000	₹166,000	₹9,960	₹581	₹20,750	₹197,291	₹19.73
Unlimited	500+	50,000+	₹830,000	₹99,600	₹2,905	₹107,900	₹1,040,405	₹20.81

Tier 1: Basic

1 School | 100 Users

User Distribution: 1 Super Admin, 1 Admin, 5 Teachers, 93 Students

Gemini API Breakdown

AI Analytics (gemini-pro):	₹1,245
Question Generation (gemini-1.5-flash):	₹208
AI Chat (gemini-1.5-flash):	₹104
Content Recommendations:	₹42
Performance Predictions:	₹62
Total Gemini API:	₹1,660

MongoDB Atlas

₹0

Free Tier (70 MB)

File Storage

₹0

Free Tier (3.46 GB)

Server Hosting

₹0

Free Tier

Total:

₹1,660/month

₹16.60 per user

Tier 2: Small

5 Schools | 500 Users

User Distribution: 1 Super Admin, 5 Admins, 25 Teachers, 469 Students

Gemini API Breakdown

AI Analytics:	₹6,225
Question Generation:	₹1,038
AI Chat:	₹519
Content Recommendations:	₹208
Performance Predictions:	₹311
Total Gemini API:	₹8,300

MongoDB Atlas

₹0

Free Tier (350 MB)

File Storage

₹0

Free Tier (17.3 GB)

Server Hosting

₹3,320

Pro Plans

Total:

₹11,620/month

₹23.24 per user

Tier 3: Medium

20 Schools | 2,000 Users

User Distribution: 1 Super Admin, 20 Admins, 100 Teachers, 1,879 Students

Gemini API Breakdown

AI Analytics:	₹24,900
Question Generation:	₹4,150
AI Chat:	₹2,075
Content Recommendations:	₹830
Performance Predictions:	₹1,245
Total Gemini API:	₹33,200

MongoDB Atlas

₹747

M10 Cluster (1.4 GB)

File Storage

₹125

69.2 GB

Server Hosting

₹3,320

Pro Plans

Total:

₹37,392/month

₹18.70 per user

Tier 4: Large

50 Schools | 5,000 Users

User Distribution: 1 Super Admin, 50 Admins, 250 Teachers, 4,699 Students

Gemini API Breakdown

AI Analytics:	₹62,250
Question Generation:	₹10,375
AI Chat:	₹5,188
Content Recommendations:	₹2,075
Performance Predictions:	₹3,113
Total Gemini API:	₹83,000

MongoDB Atlas

₹4,731

M30 Cluster (3.5 GB)

File Storage

₹291

173 GB

Server Hosting

₹16,600

Business Plans

Total:

₹104,622/month

₹20.92 per user

Tier 5: Enterprise

100 Schools | 10,000 Users

User Distribution: 1 Super Admin, 100 Admins, 500 Teachers, 9,399 Students

Gemini API Breakdown

AI Analytics:	₹124,500
Question Generation:	₹20,750
AI Chat:	₹10,375
Content Recommendations:	₹4,150
Performance Predictions:	₹6,225
Total Gemini API:	₹166,000

MongoDB Atlas

₹9,960

M50 Cluster (7 GB)

File Storage

₹581

346 GB

Server Hosting

₹20,750

Business + CDN

Total:**₹197,291/month**

₹19.73 per user

Tier 6: Unlimited Scale

500+ Schools | 50,000+ Users

User Distribution: 1 Super Admin, 500+ Admins, 2,500+ Teachers, 47,000+ Students

Gemini API Breakdown

AI Analytics:	₹622,500
Question Generation:	₹103,750
AI Chat:	₹51,875
Content Recommendations:	₹20,750
Performance Predictions:	₹31,125
Total Gemini API:	₹830,000

MongoDB Atlas

₹99,600

M100 Cluster (35 GB)

File Storage

₹2,905

1.73 TB

Server Hosting

₹107,900

Enterprise + CDN + LB

Total:

₹1,040,405/month

₹20.81 per user

Annual Cost Projection

Tier	Monthly (INR)	Annual (INR)	Annual (30% Optimized)
Basic	₹1,660	₹19,920	₹13,944
Small	₹11,620	₹139,440	₹97,608
Medium	₹37,392	₹448,704	₹314,093

Tier	Monthly (INR)	Annual (INR)	Annual (30% Optimized)
Large	₹104,622	₹1,255,464	₹878,825
Enterprise	₹197,291	₹2,367,492	₹1,657,244
Unlimited	₹1,040,405	₹12,484,860	₹8,739,402

Cost Distribution Analysis

1. **Gemini API:** 80-85% of total costs (Primary cost driver)
2. **MongoDB Atlas:** 5-10% of total costs
3. **File Storage:** 0.5-1% of total costs
4. **Server Hosting:** 10-15% of total costs

Key Insight: Cost per user remains consistent at approximately **₹16-23 per user** across all tiers, making the platform highly scalable.



Cost Optimization Recommendations

Gemini API Optimization: Use gemini-1.5-flash for chat, cache AI responses, batch analytics.
Estimated Savings: 30-40%

MongoDB Optimization: Archive old data, use indexes efficiently, implement data compression.
Estimated Savings: 20-30%

File Storage Optimization: Compress videos before upload, use CDN for delivery, implement lazy loading. **Estimated Savings: 15-25%**

Server Optimization: Use serverless for variable workloads, implement Redis caching, optimize API responses. **Estimated Savings: 10-20%**

With all optimizations implemented, you can achieve 30-40% overall cost reduction !

Revenue Model Suggestions

Per School Pricing:

✓ **Basic Plan:** ₹4,150/month per school (up to 100 users)

✓ **Pro Plan:** ₹12,450/month per school (up to 500 users)

✓ **Enterprise Plan:** Custom pricing (500+ users)

Per Student Pricing:

✓ **Basic:** ₹166/month per student

✓ **Pro:** ₹249/month per student (includes AI features)

✓ **Enterprise:** ₹332/month per student (all features)

Profitability Analysis:

 **Basic Tier:** ₹4,150 revenue vs ₹1,660 cost = **₹2,490 profit (60% margin)**

 **Small Tier:** ₹20,750 revenue vs ₹11,620 cost = **₹9,130 profit (44% margin)**

 **Medium Tier:** ₹83,000 revenue vs ₹37,392 cost = **₹45,608 profit (55% margin)**

Report Generated: January 2025

Exchange Rate Used: 1 USD = ₹83 (Indian Rupees)

Note: All costs are estimates and may vary based on actual usage patterns, geographic location, and provider pricing changes.

Based on CogniLearn Platform Codebase Analysis