

A 2-days National Level Hackathon on AI in education

Competitive Exam Preparation

MANTRIX

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www.samadhan.sistec.ac.in/

AREA OVERVIEW

OUTLAWED – Smarter CLAT Prep

- CLAT = India's toughest law exam
- Students lack daily, sectional & chapter-wise practice

⚡ Why AI Matters



- AI = Exam-accurate mocks (120Q, passage-rich)
- Handles large contexts & story-style questions
- Adds structured prep + analytics-driven insights



Our Motivation

- From real classrooms → Brother, a CLAT mentor, saw the gap
- Outlawed bridges this gap with AI-powered test creation



SAMADHAN
CODE CREATE & INNOVATE

Potential Challenges and Opportunities

PAIN POINTS:

- ✗ Sectional & Daily Practice
- ✗ CLAT requires long, story-based, passage-heavy questions (120Q format).
- ✗ Offline exam → students need PDF mock tests (not just online)
- ✗ Students get generic papers, not tailored to their needs.
- ✗ Many APIs/models struggle to handle large passage contexts.
- ✗ No feature to share custom tests, track peer progress, or learn in rooms/groups.

OPPORTUNITIES :

- AI-generated tests (online + downloadable PDFs) 
- Adaptive learning paths & weak-point analysis 
- Institute collaboration + AI curation to enrich content 
- Gamification & leaderboards for motivation 
- Community features: global chat, custom rooms, resource sharing 
- End-to-end analytics for progress tracking & insights 

Preliminary Solution Concept

AI-driven Mock Generation

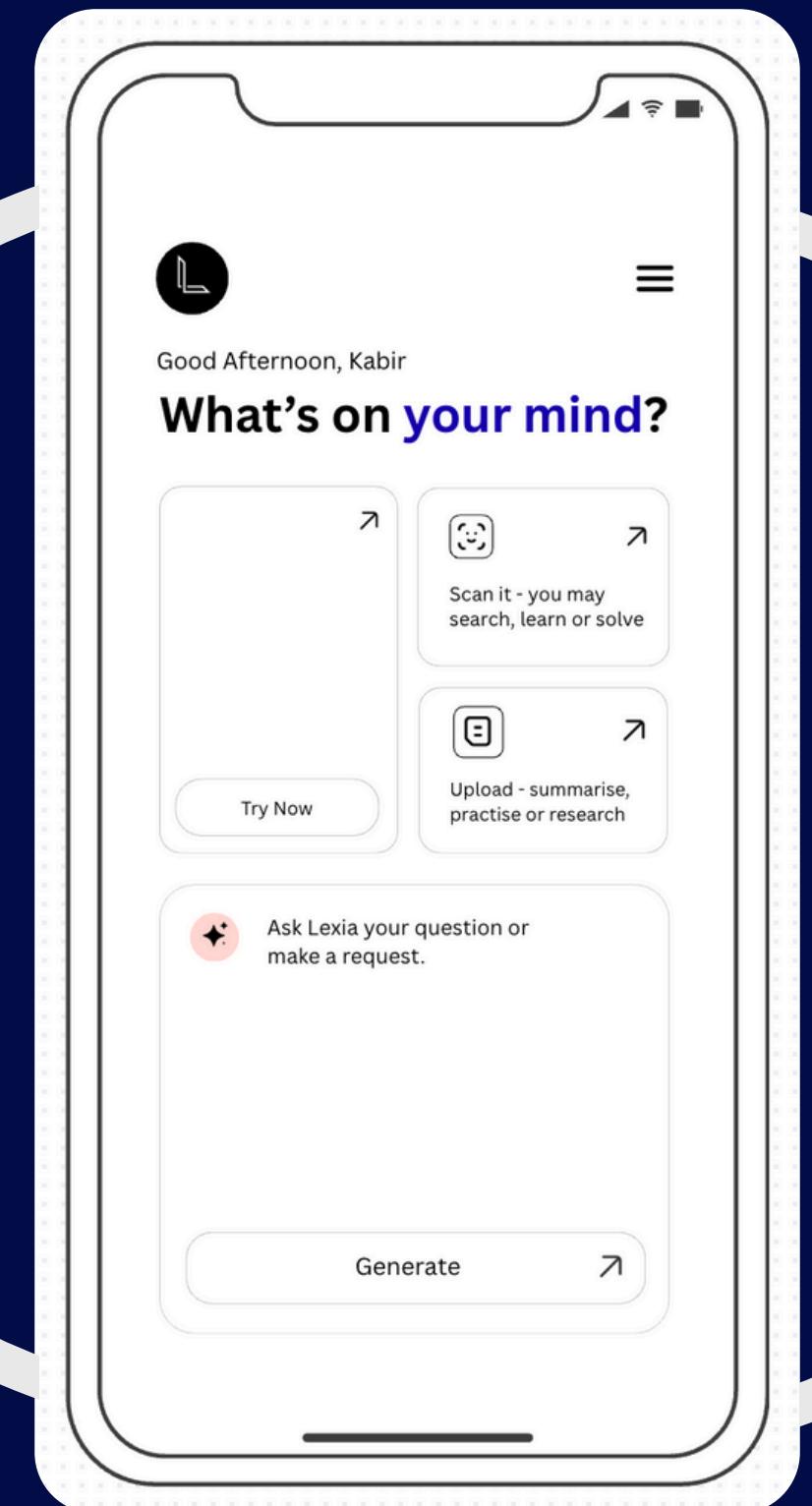
Creates 120Q CLAT-style tests with passages & context.

Automated Test Creation

Scrapes Q-bank, auto-generates tests.

Personalized Practice

Market trends, company changes.



Smart Analytics

Growth, cost-cutting, investments.

Interactive AI Assistant

Key ratios, liquidity status.



Seamless Experience

Numbers tell a story—make sure yours is compelling!

Key Features and Functionalities

AI Test Engine

Auto-generate online + offline (PDF) mock tests.



Adaptive Learning

Topic-wise practice, weak-point analysis, progress tracking.



Content Hub

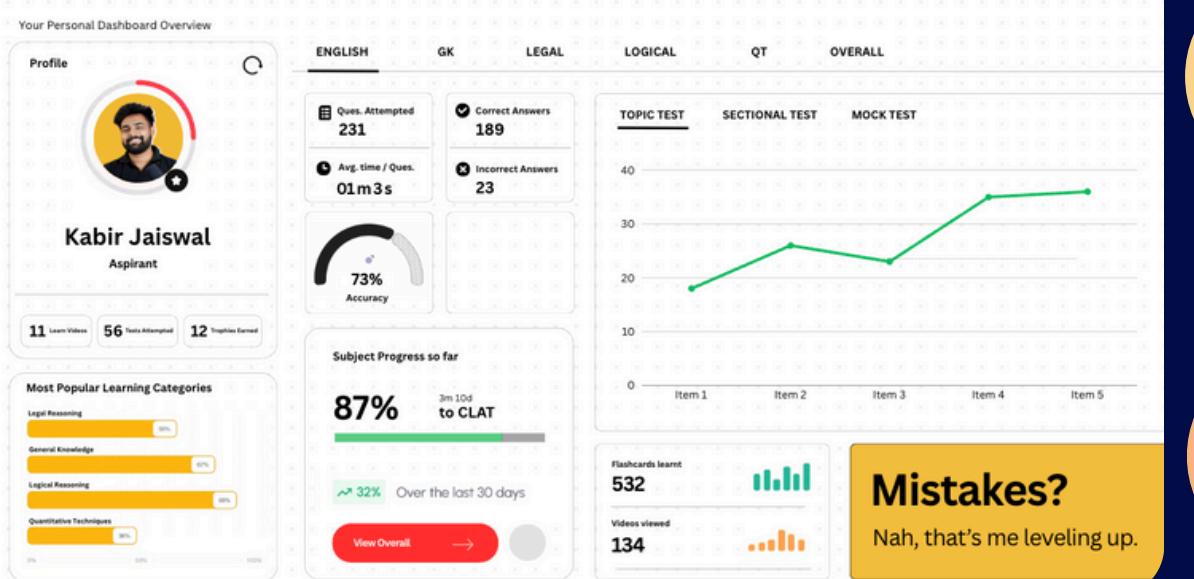
Organized videos + curated study material (institutes + open sources).



Gamification

Leaderboards, streaks, goodies, motivational quotes & reminders.

Welcome, Kabir



Community Learning

Custom tests, global chat, study rooms, peer sharing.



24/7 Smart Assistant

Doubt-solving with multilingual support.



Analytics Dashboard

Graphs, accuracy rates, daily study hours, streak monitoring.



Secure & Scalable

Encrypted data, cloud-based scalable architecture.



home

Welcome, Kabir

Your Personal Dashboard Overview

Profile

Kabir Jaiswal
Aspirant

ENGLISH GK LEGAL LOGICAL QT OVERALL

Ques Attempted: 231 | Correct Answers: 189 | Avg Time / Ques: 01m3s | Incorrect Answers: 23

73% Accuracy

Subject Progress so far: 87% to CLAT

Mistakes? Nah, that's me leveling up.

Pressure? That's just fuel for my success flex.

Distractions? Muted Focus mode ON.

Most Popular Learning Categories

Progress

13 Days 6.1h Learning Time this week

&
practice

learn

gk

OUTLAWED

LEGAL GK ENGLISH MATHS LOGICAL

KEY TOPICS OPEN SOURCE CONTENT

- Ancient History
- Medieval History
- Modern History
- Polity & Constitution
- Economics
- Geography
- Space 2026
- International 2026
- National 2026
- Defense 2026
- Science & Tech 2026
- Sports 2026
- Answers 2026
- Appointments 2026
- Day & Dates 2026

OUTLAWED

LEGAL GK ENGLISH MATHS LOGICAL

KEY TOPICS	DESCRIPTION	STATUS	SCORE	TAKE ACTION
Medical Termination of Pregnancy Act	MTP Sectional Test - 01	Completed	100	Analyze Reattempt
Prevention of Unfair Means Act	MTP Sectional Test - 02	Completed	100	Analyze Reattempt
Representation of People's Act	MTP Sectional Test - 03	Completed	100	Analyze Reattempt
Constitution of India	MTP Sectional Test - 04	Pending	100	Analyze Reattempt
Alternate Dispute Resolution	MTP Sectional Test - 05	Completed	100	Analyze Reattempt
Laws of Terms	MTP Sectional Test - 06	Completed	100	Analyze Reattempt
Bargaining Regulation Act	MTP Sectional Test - 07	Completed	100	Analyze Reattempt
International Law	MTP Sectional Test - 08	Pending	100	Analyze Reattempt
Laws of Contracts	MTP Sectional Test - 09	Completed	100	Analyze Reattempt
POCO & POSH	MTP Sectional Test - 10	Pending	100	Analyze Reattempt
Transgender Protection Act	MTP Sectional Test - 11	Completed	100	Analyze Reattempt
Article 370 & J&K	MTP Sectional Test - 12	Completed	100	Analyze Reattempt
Laws of Crimes	MTP Sectional Test - 13	Completed	100	Analyze Reattempt
Motor Vehicle Act	MTP Sectional Test - 14	Pending	100	Analyze Reattempt
Digital Personal Data Protection Act	MTP Sectional Test - 15	Completed	100	Analyze Reattempt

Welcome back, Nitesh! 🙌

Ready to ace your CLAT preparation?

ALL ENGLISH GK LEGAL LOGICAL MATHS

NAME	TYPE	STATUS	SCORE	TAKE ACTION
MTP 1	FREE	Completed	-12.5/100	Analysis Re-attempt

Nitesh Chourasiya chaurasiyanitesh68@gmail.co...

Admin Dashboard Settings & More

Profile

Manage your account settings and preferences

Personal Information

Update your personal details and contact information

Full Name	Email
Nitesh Chourasiya	chaurasiyanitesh68@gmail.com
Role	Member Since
Administrator	August 2025

Edit Profile Name

Nitesh Chourasiya chaurasiyanitesh68@gmail.co...

Admin Dashboard Settings & More

Notifications

Stay updated with the latest news and test activations

0 unread notifications

New Free Test Available! Test Activation Broadcast

MTP 1 is now available for free users. Start practicing now!

04/09/2025 All Users Take Free Test

Nitesh Chourasiya chaurasiyanitesh68@gmail.co...

Admin Dashboard Settings & More

Leaderboard

Top performers in CLAT preparation

Rank	User	Score	Tests Taken
1st Place	Tanya Patel	20	1 tests
2nd Place	Nitesh Chourasiya	10	1 tests
3rd Place	TURBO Jatin	0	3 tests

Other Top Performers

Ramanand Kumar #4 points 0

Your Ranking

Nitesh Chourasiya Rank #2

Nitesh Chourasiya chaurasiyanitesh68@gmail.co...

Admin Dashboard Settings & More

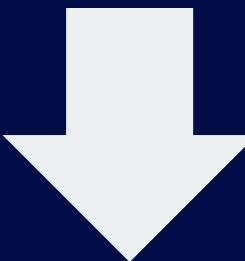
Outlawed.in

Target Users and Expected Use Cases

01

Students

CLAT aspirants needing structured prep.

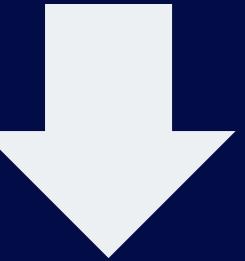


Videos
AI tests
Study rooms
Leaderboards
Weak-area Analytics

02

Coaching Institutes

Want AI-powered mock tests & materials.

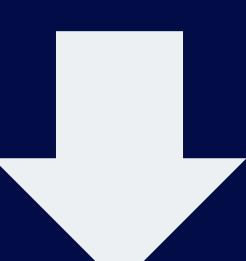


Branded prep
Upload material
Auto-generate tests
Student engagement

03

Educators/Admins

Upload, monitor & analyze student progress.



Share tests
Track performance
Analytics dashboard
Motivate via Rewards

Data Requirements and Privacy Considerations

Data Requirements

- Minimal user info (name, email/login only)
- Previous year + online mocks for test pool
- User-generated tests & scores for leaderboard
- Aggregated data → future AI insights

Privacy Considerations

- Users control who sees their tests
- Leaderboard shows only score & rank
- Data encrypted & anonymized for safety
- No sharing of personal data with third parties

OUTLAWED	Search tests, topics, or students...				
	LEGAL	GK	ENGLISH	MATHS	LOGICAL
	KEY TOPICS	DESCRIPTION	STATUS	SCORE	TAKE ACTION
	Medical Termination of Pregnancy Act	MTP Sectional Test - 01	Completed	53/100	Analysis Re-attempt
	Prevention of Unfair Means Act	MTP Sectional Test - 02	Completed	27/100	Analysis Re-attempt
	Representation of People's Act	MTP Sectional Test - 03	Completed	100/100	Analysis Re-attempt
	Constitution of India	MTP Sectional Test - 04	Pending	0/100	Analysis Attempt
	Alternate Dispute Resolution	MTP Sectional Test - 05	Completed	53/100	Analysis Re-attempt
	Law of Torts	MTP Sectional Test - 06	Completed	27/100	Analysis Re-attempt
	Surrogacy Regulation Act	MTP Sectional Test - 07	Completed	100/100	Analysis Re-attempt
	International Law	MTP Sectional Test - 08	Pending	0/100	Analysis Re-attempt
	Law of Contracts	MTP Sectional Test - 09	Completed	53/100	Analysis Re-attempt
	POCSO & POSH	MTP Sectional Test - 10	Pending	0/100	Analysis Re-attempt
	Transgender Protection Act	MTP Sectional Test - 11	Completed	53/100	Analysis Re-attempt
	Article 370 & 35A	MTP Sectional Test - 12	Completed	27/100	Analysis Re-attempt
	Law of Crimes	MTP Sectional Test - 13	Completed	100/100	Analysis Re-attempt
	Motor Vehicle Act	MTP Sectional Test - 14	Pending	0/100	Analysis Re-attempt
	Digital Personal Data Protection Act	MTP Sectional Test - 15	Completed	53/100	Analysis Re-attempt

AI Technologies and Methods

Data Collection

PDF/Word Scraper extracts mock papers & past tests
Faster migration into central database

Data Organization

AI Agent arranges tests & questions
Syncs with admin-generated content



Semantic Search

Vector DB → finds similar words & concepts
Boosts relevant, exam-accurate question creation

Question Generation

Own trained model for realistic 120Q mocks
Ensures context-rich & passage-based Qs

AI Models & APIs

Testing with Gemini (RAG)
Future: Gemini Pro / ChatGPT / HuggingFace APIs

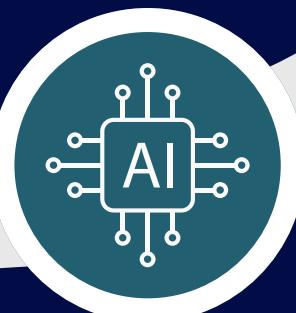
Tech Stack

MongoDB, Cloudflare S3, Cloudinary → data & storage
Next.js (SSR) → smooth & scalable UI/UX

Implementation Approach

1. Setup & Data (W1–2)

- Scraper (PDF/Word for mocks & past papers)
- MongoDB + Cloudflare/Cloudinary storage
- Admin panel for subject/topic uploads



2. AI Core (W3–4)

- Gemini RAG + fallback (ChatGPT/HF)
- Vector DB for semantic Q-gen
- Whisper NLP for Hindi–English support
- Progress tracking (scores, attempts, time)

- ## 3. User Features (W5–6)
- Multimedia input: text, audio, video, PDFs
 - Study rooms, chat groups, peer notifications
 - AI-powered custom test generator
 - Analytics dashboard (weak areas, leaderboard, streaks)



4. Testing & Deployment (W7–8)

- MCP sync (cross-device)
- Beta testing with students & mentors
- Next.js SSR scalable deployment
- End-to-end encryption & data privacy



5. Continuous Improvement (Post-launch)

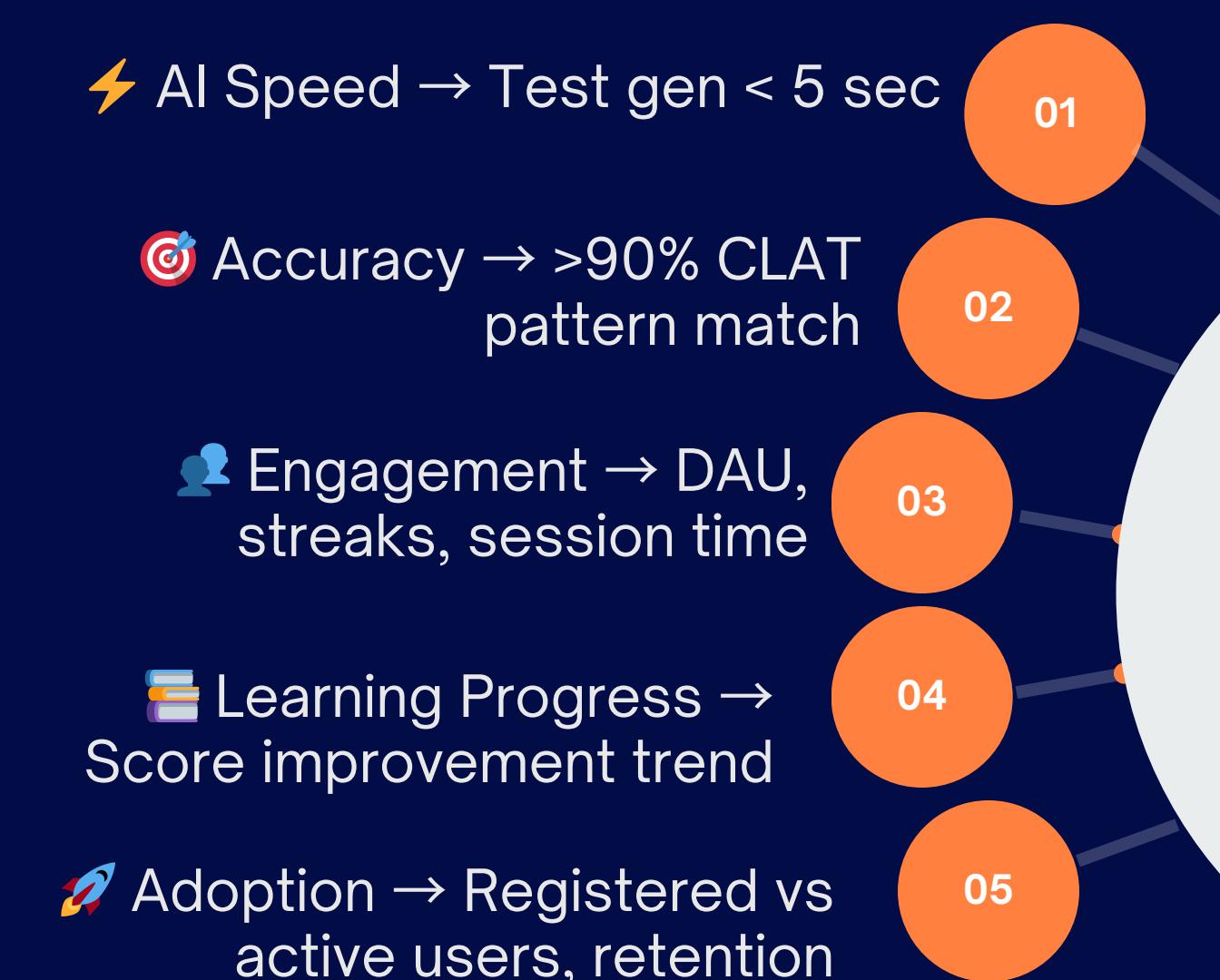
- Feedback → refine test difficulty & AI accuracy
- Add advanced analytics & adaptive learning paths
- Expand AI to real-time legal GK updates



Evaluation Metrics



- 01 Better Prep – AI mocks boost accuracy & efficiency. (Target icon)
- 02 Affordable – Cuts costly coaching & manual effort. (Dollar sign icon)
- 03 Engaging – Personalized feedback, bilingual support, gamified learning. (Smiley face icon)
- 04 Time-Saving – Auto test creation & instant practice. (Hourglass icon)
- 05 Scalable – Thousands learn with adaptive AI. (Bar chart icon)



Thank You!