

PRODUCT + UI/UX

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YIPENG ZHANG

2026

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Product definition

UI/UX

Frontend

AI integration

Next.js

React

Multi-agent productization

I started in UI/UX and frontend, and now also own product definition and engineering delivery. I am currently building CramAI, turning multi-agent AI into a loop people can study, test, and track.



FLAGSHIP · DEC 2025–PRESENT

CramAI

Multi-agent AI learning assistant

PROBLEM

Study materials, practice, and tracking do not share one path.

ROLE

Product lead. I set direction and built the interface, frontend, and these path states.

Agents, variant generation, retrieval, and cloud infrastructure were owned by teammates.

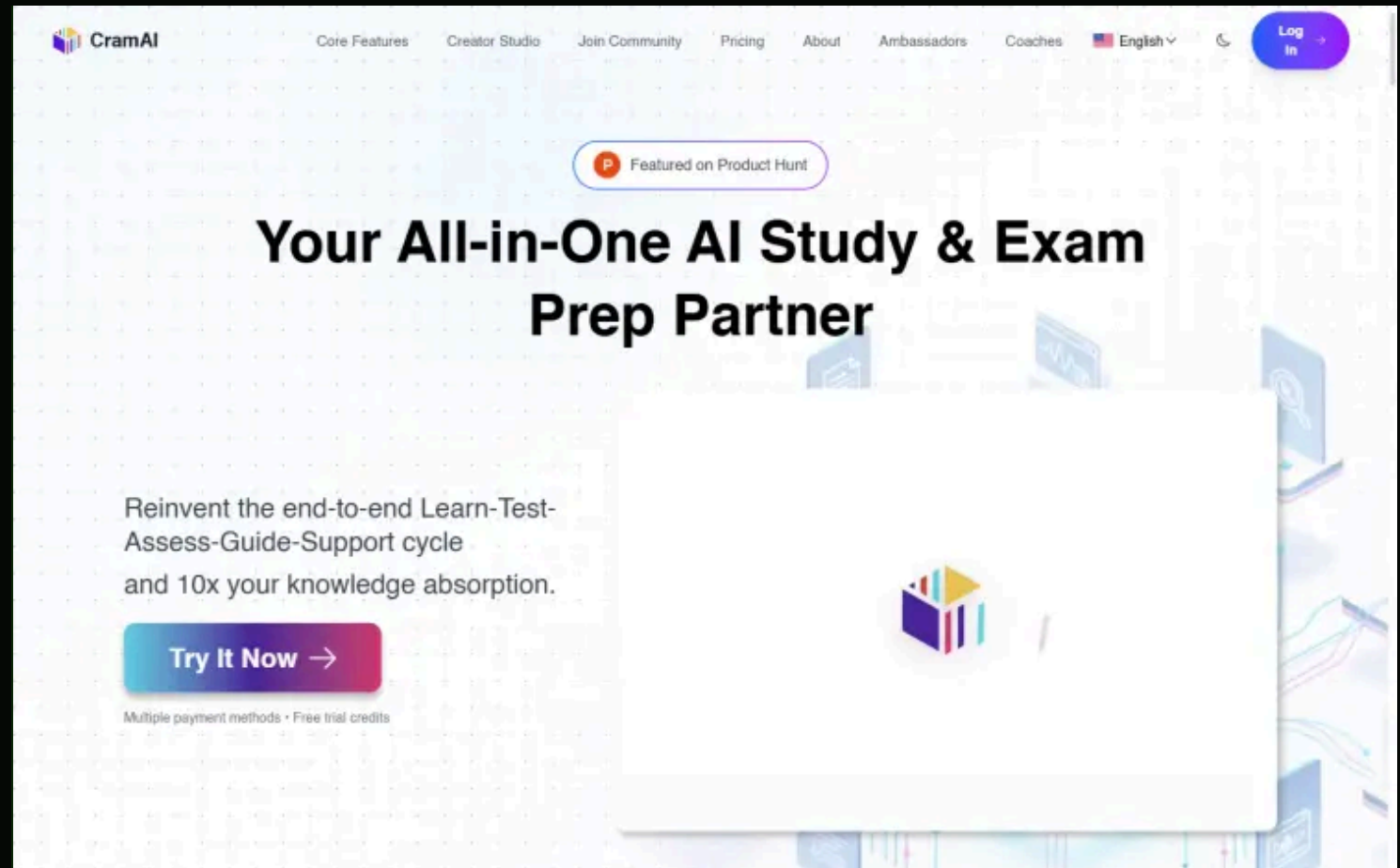
1,264

Active users in 90 days

22,514

Product events

GA4 aggregate usage signal, Jun 7–Sep 4 2026. Not a growth, retention, or conversion-lift claim.



Try it, then register, then pay

Guests get 3 tutor messages a day. Flashcards, quizzes, and published mock exams open after registration. Podcasts, posters, and web search are paid.

	Try →	Register →	Pay
FEATURE	GUEST	FREE	PRO
Chat / day	3	10	200
Summary / day	1	3	50
Mind map / day	1	3	50
Flashcards / day	—	3	50
Quiz / day	—	3	50
Study plan / day	—	1	20
Mock exam / month	—	1	10
Wrong-answer scan / day	—	2	Unlimited
Podcast, poster / month	—	—	30
Web search	Off	Off	On

Counts come from the product entitlement table. Max removes these caps. Guests also get a separate 12-question mock that does not use the monthly exam quota. See 05.

Value before login

REJECTED

A full-page login wall.

CHOSE

Enter silently. Register after the exam.

The screenshot displays an 'AI Mock Exam' interface. At the top, it shows 'English' as the selected language, a timer at '01:58:51', and buttons for 'Submit >' and 'Pause & Exit'. Below the header is a 'QUESTION NAVIGATION' grid with 64 numbered buttons (1-64). The first button (1) is highlighted in blue. To the right of the grid, a question box is shown for 'Q 1 / 120', which is a 'Single Choice' question of 'Medium' difficulty. The question text is: 'In cases where applicable local laws governing calculation and presentation of investment performance conflict with the GIPS standards, firms are: (Score: 1)'. There are three answer options: A. 'unable to claim GIPS compliance in cases where local regulations prohibit accurate calculation.', B. 'required to calculate and maintain two sets of performance data in order to claim GIPS compliance.', and C. 'required to comply with local regulations and make full disclose of the conflict to claim GIPS compliance.'. At the bottom of the question box, there are 'Previous' and 'Next >' navigation buttons. On the far right, there are additional controls: a 'Switch' button, a 'A/B/C/D Select' dropdown, a 'Flag' button, and a 'Full Screen' button.

01

Silent entry

On the paper: type size, highlights, and striking out options.

02

Answers stay off the screen

03

Register after grading

Summary

Working memory

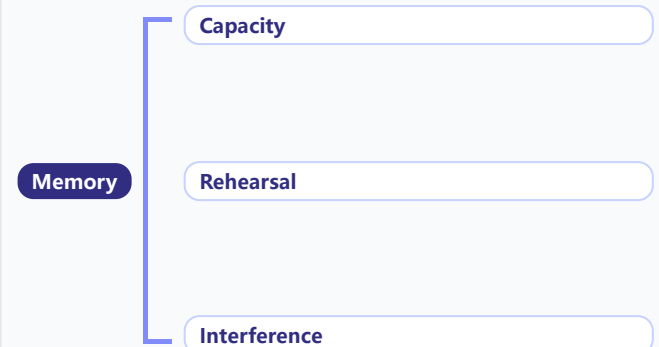
It holds only what you are using. Capacity is small. Rehearsal keeps it longer.

Transcript

00:12 Working memory holds only what you are using.

00:28 New interference pushes the old trace out.

Mind Map



Flashcards

QUESTION
What pushes it out?
Click to flip

1 / 4

Notes

B | •

Capacity is small. Rehearsal keeps a trace longer.

Resources

▶ Working memory · 3:20

↗ Rehearsal and interference

Quiz

1 What pushes working memory out?

A Interference

B Sleep

C Repetition

Knowledge Poster

Working memory
Capacity is limited
Rehearsal holds it
Interference clears it

Podcast

▶ 0:12 / 1:40

Host: Capacity is small. Rehearsal keeps it longer.

The toolbox opens in AI Tutor

REJECTED

Summaries, flashcards, and quizzes each open a door.

CHOSE

Toolbox outputs stay in the same conversation.

AI Tutor

Study plan

View materials

Hi! I'm your AI study assistant. Based on working-memory.pdf, what would you like to know?

Make a summary of this material, and a set of flashcards.

Both outputs hang on the current material, in this same conversation.

Summary

Working memory holds only what is being processed right now.
Capacity is limited. Rehearsal keeps it longer.
Interference pushes out what was there.

Flashcards

QUESTION

What pushes working memory out?

Click to flip

< >
1 / 4

Content is generated by AI and may be wrong. Check anything important.

working-memory.pdf

Working memory

Working memory holds only what you are using, and does not store it for long.

Capacity is small, often just a few items.
Rehearsal keeps a trace longer.

When something new interrupts, the old trace gets pushed out.

Summary

Mind map

Flashcards

Quiz

01

Current material

02

Outputs in the same session

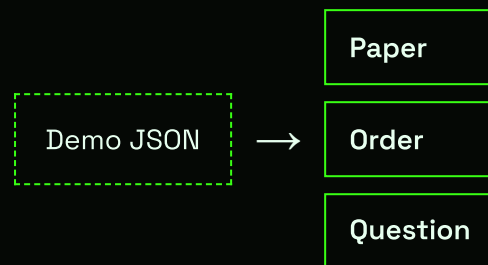
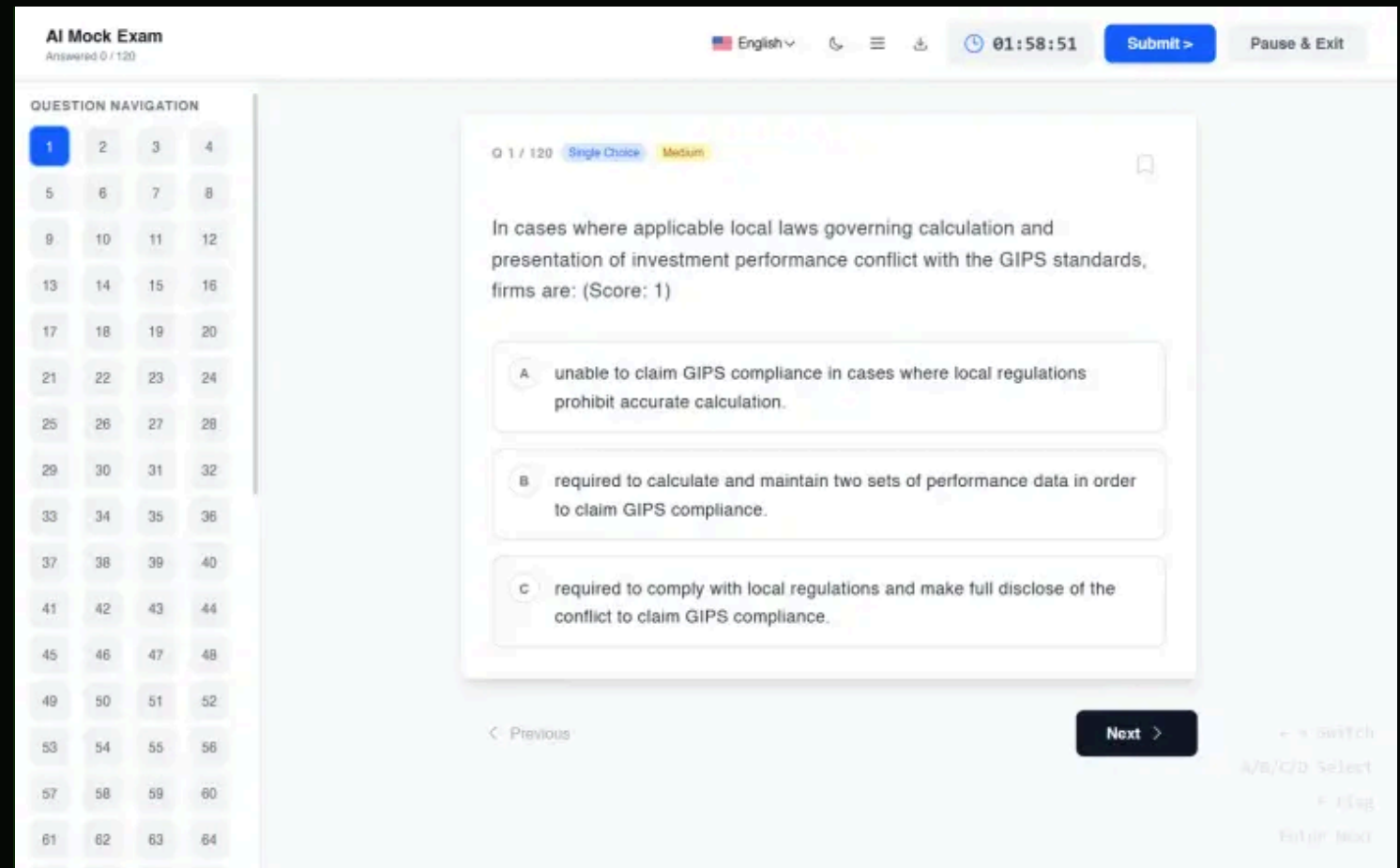
Papers arrange. Questions are entities.

REJECTED

One demo JSON.

CHOSE

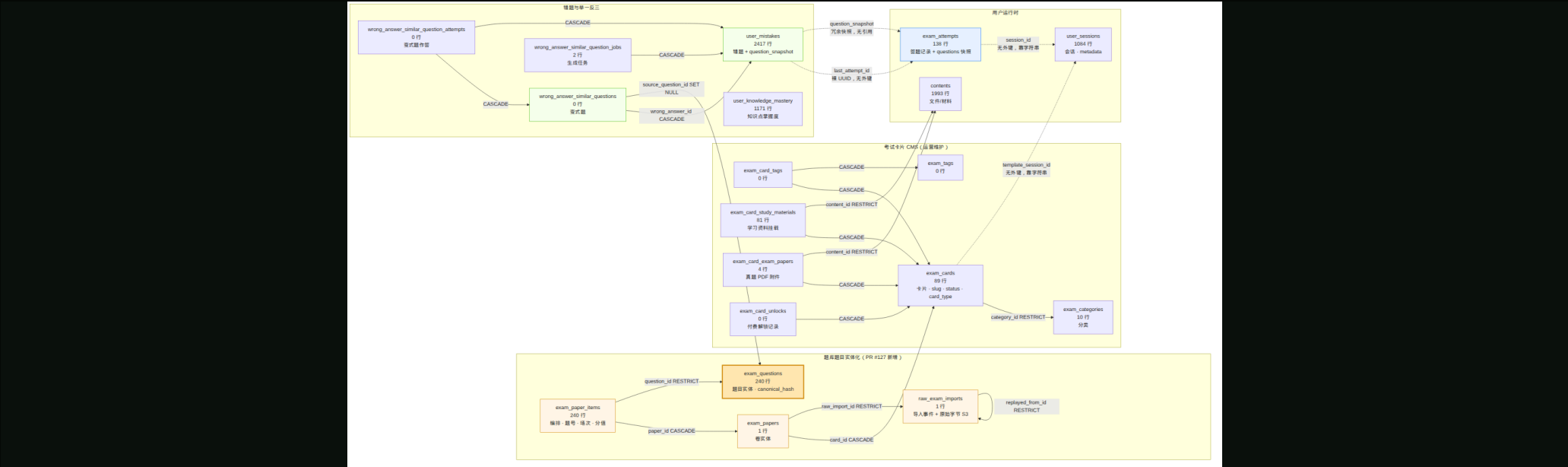
Papers only order items. Questions live on their own.



The exam runs on a published paper. Missing source numbers stay as gaps.

Question bank database

This picture is how an exam is stored. A category holds programs and tracks. A paper only orders questions. Questions are reusable entities. Knowledge points are one tree, attached to questions, not copied for every track.



LAYERS IN THE BANK

The knowledge tree is separate from tracks. Learners still pick from a list.

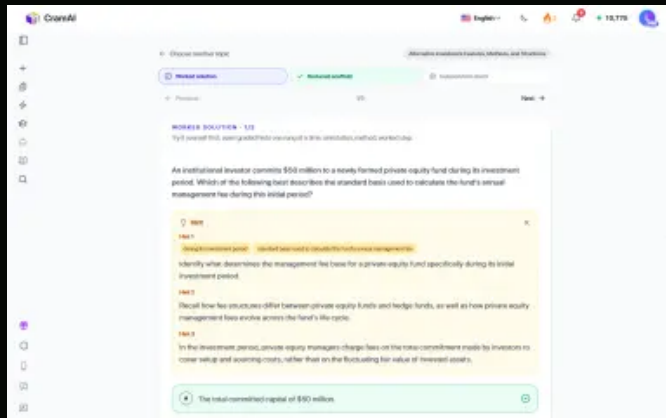
LAYER	WHAT IT DOES
Category	Groups exams
Program	One exam
Track	Level, or national vs provincial
Paper	Orders the questions
Question	A reusable entity
Knowledge point	One tree, attached to questions

The public library reads category, program, track, then paper. Solid lines are foreign keys. Dashed lines are not.

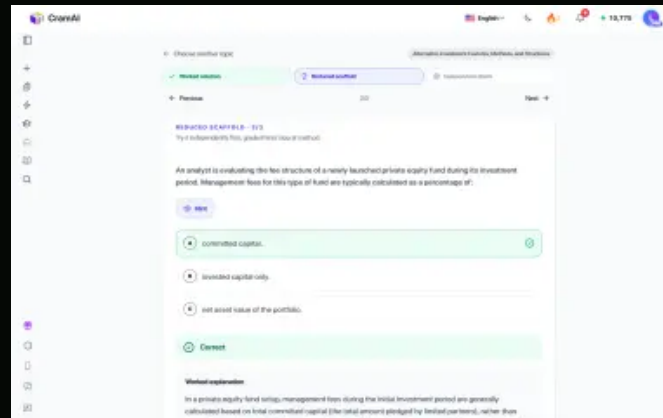
Three rungs. Original stems stay hidden.

Learners see variants. A miss does not end the round. Two misses on the last rung hand the previous scaffold back.

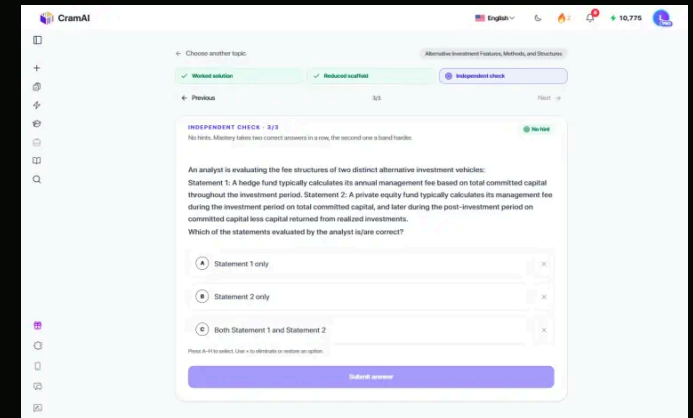
The syllabus is stored once. Tags are not approved yet, so learners still pick from a list, not a tree.



Full explanation



Half hint



Zero hint

A hinted correct is not mastery

Mastery takes two consecutive zero-hint passes. The second is harder.

L1 Orient

L2 Method

L3 Step

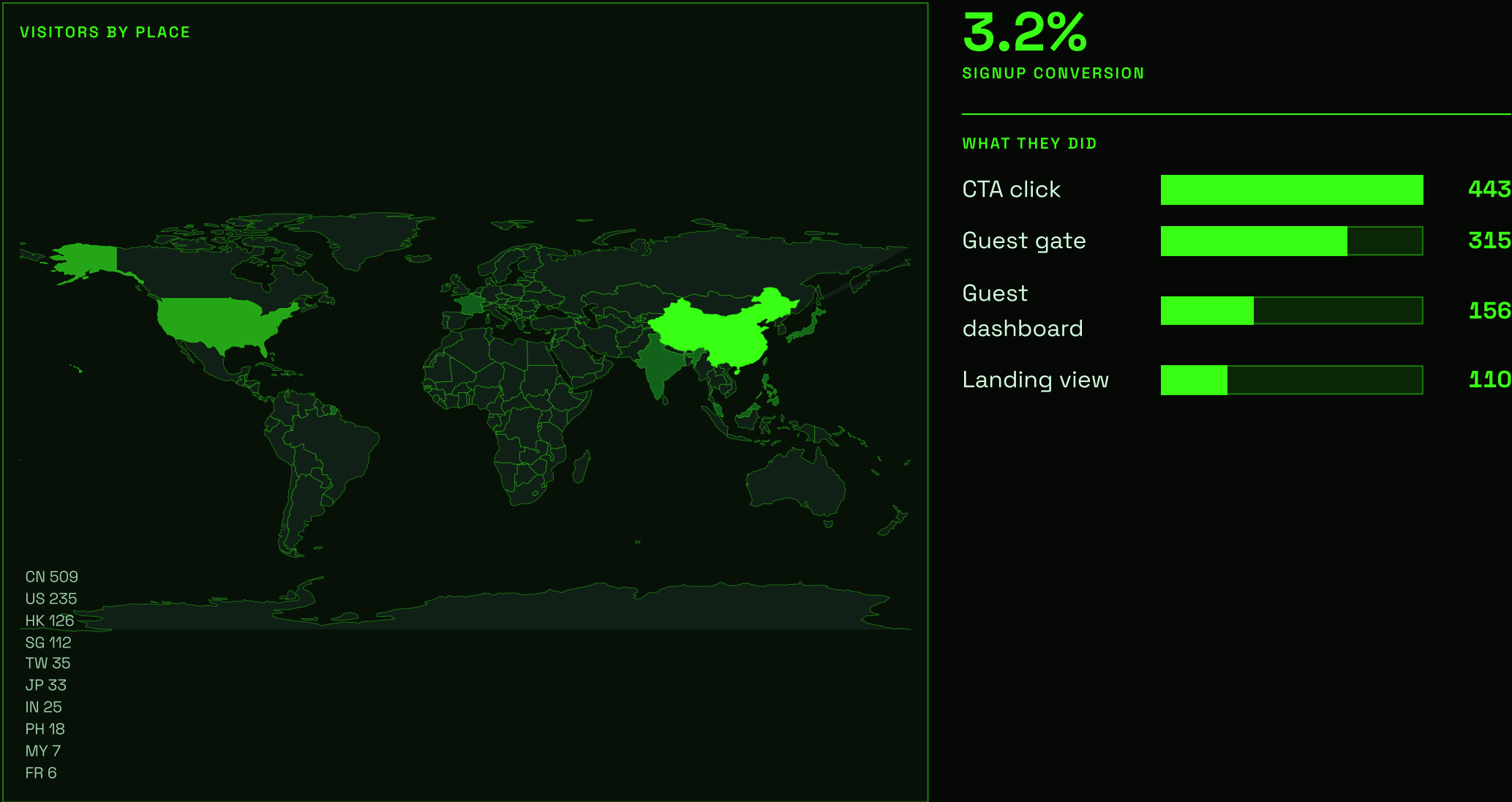
Confirmation, one band up

Seeing a hint, then answering correctly, is not mastery.

The screenshot displays the CramAI web application interface. At the top, the CramAI logo is on the left, and the top right corner shows a language dropdown set to 'English', a moon icon, a fire icon with the number '2', a notification bell with '3', a green plus sign with '10,775', and a user profile icon labeled 'L1 (950)'. A sidebar on the left contains icons for a document, a plus sign, a folder, a lightning bolt, a trash can, a book, a magnifying glass, a gift, a gear, a smartphone, a speech bubble, and a photo. The main content area has a header 'Choose another topic' with a dropdown menu currently showing 'Alternative Investment Features, Methods, and Structures'. Below this are three tabs: 'Worked solution' (checked), 'Reduced scaffold' (checked), and 'Independent check' (selected). Navigation links 'Previous' and 'Next' are shown with '3/3' in between. The 'INDEPENDENT CHECK · 3/3' section includes a 'No hint' button. The question text reads: 'No hints. Mastery takes two correct answers in a row, the second one a band harder. An analyst is evaluating the fee structures of two distinct alternative investment vehicles: Statement 1: A hedge fund typically calculates its annual management fee based on total committed capital throughout the investment period. Statement 2: A private equity fund typically calculates its management fee during the investment period on total committed capital, and later during the post-investment period on committed capital less capital returned from realized investments. Which of the statements evaluated by the analyst is/are correct?'. Three multiple-choice options are listed: 'A Statement 1 only', 'B Statement 2 only', and 'C Both Statement 1 and Statement 2'. Each option has a small 'x' icon to its right. At the bottom, a purple button says 'Submit answer'. A small instruction at the bottom of the question area reads: 'Press A-H to select. Use x to eliminate or restore an option.'

90-day product tree

Plausible, Jun 30–Sep 27, 2026. Signup conversion is unique visitors. Brighter green means more visitors: China first, then the US.



3.2% is $38 \div 1,173$. The funnel counts events, scaled to 443. Payment conversion is not shown.

UI / WEB · APR 2025

Frame by Frame

A mosaic site that lets people switch art styles on their own photos

PROBLEM

Art styles stay vocabulary until people can try them. This site turns an uploaded photo into Pop Art, Impressionist, or Cubist mosaics, with artwork metadata and live comments on the same interface.

ROLE

Team project. I owned the UI prototype, frontend integration, and mosaic.js refactor so style switching, carousel, and comments share one interface.

01

Miro

Collapsed interaction goals and style choice into one visitor path.

02

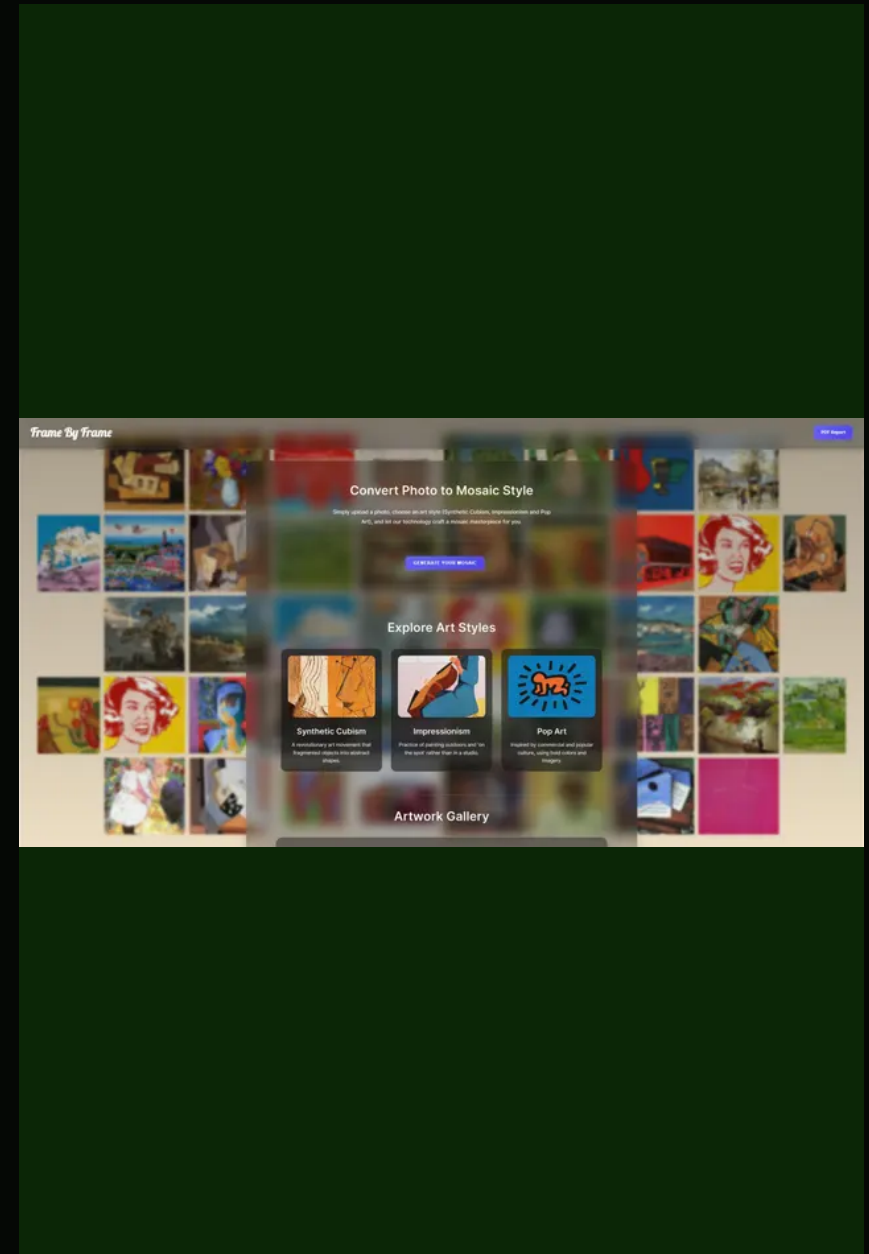
Figma prototype

Turned upload, style switching, artwork info, and comments into a clickable UI.

03

Frontend integration

Refactored mosaic.js so heavy tile loads still allow style switching and comments.



LIVE UI: UPLOAD A PHOTO, SWITCH ART STYLES, READ ARTWORK INFO AND COMMENTS.

ACADEMIC SYSTEM · AUG 2025

AI-Powered Audience Insights

From YouTube comments to content strategy

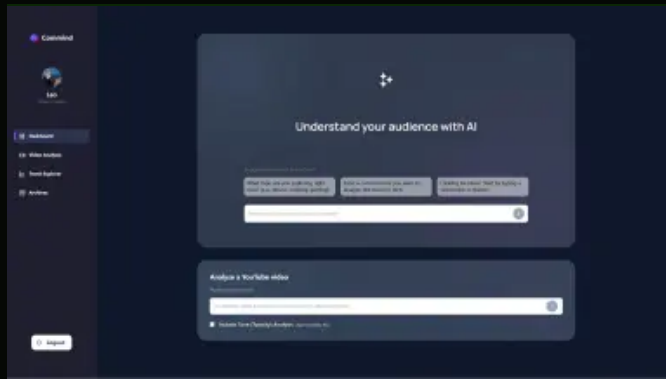
This project builds an AI tool that helps content creators by analysing audience feedback, filtering toxic comments, and generating useful ideas from user comments. Sentiment analysis and keyword grouping turn real opinions into strategies you can act on.

The system supports trend analysis across multiple videos and ongoing AI conversations. It uses RAKE, KeyBERT, and a locally deployed Llama 3 model rather than platform vanity metrics alone.

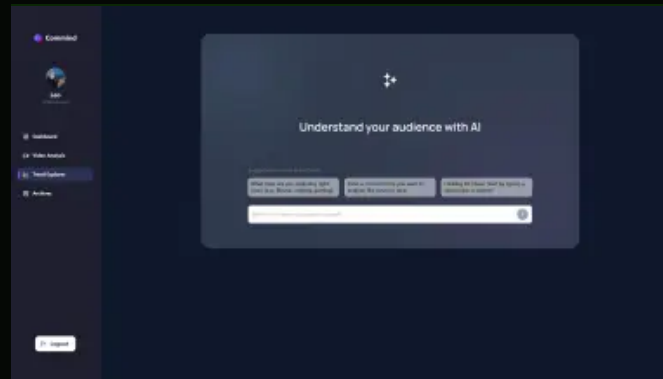


SYSTEM OVERVIEW — COMMENT ANALYSIS TO STRATEGY SUGGESTION.

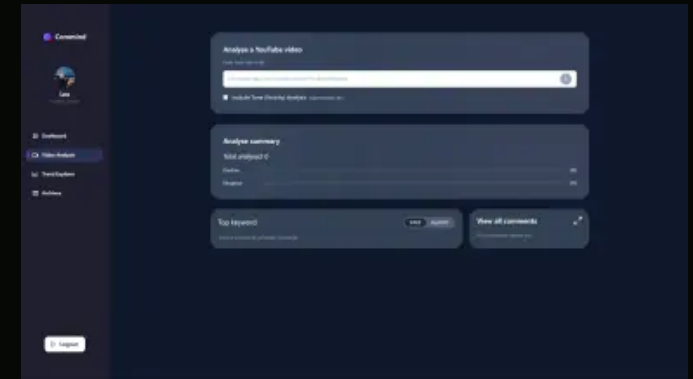
SYSTEM AND FINAL WEBSITE



DASHBOARD — CHANNEL PERFORMANCE AND KEY METRICS.



TREND EXPLORER — EMERGING TOPICS ACROSS VIDEOS.



VIDEO ANALYSIS — SENTIMENT, KEYWORDS, AND COMMENT BREAKDOWN.

SHIPPED SPATIAL WORK · JAN 2024

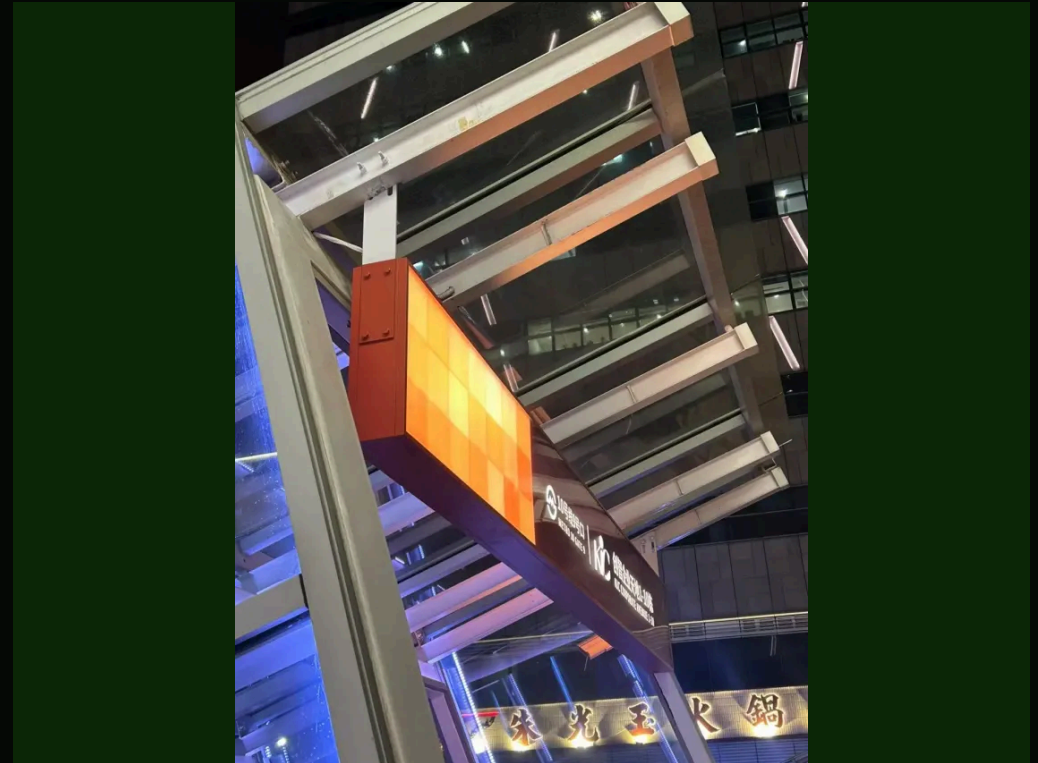
University Road Wayfinding

Yangpu District, Shanghai

A wayfinding system for University Road around the Knowledge & Innovation Community. High-contrast color, modular structures, and night illumination — short proof of work that left the screen and was installed on the street.



FREESTANDING DIRECTIONAL SIGNS.



OVERHEAD GANTRY, NIGHT VIEW.