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TechSprint

Leveraging the power of AI

Team Details

a. Team name: CacheCrew
b. Team leader name: Aritra Saha
c. Problem Statement: Open Innovation
d. Domain: AI Ed Tech

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PROBLEM STATEMENT

THE PROBLEM

Most EdTech platforms still operate on a static model. Students, with their unique learning styles and paces, are forced into a uniform system. This leads to declining engagement, poor knowledge retention, and ultimately, ineffective learning outcomes.

OUR SOLUTION

Cognify is an AI-powered, gamified EdTech platform designed for truly personalized learning experiences. We leverage AI-driven performance analysis to dynamically adapt content difficulty, learning pace, and reinforcement, making education engaging, adaptive, and outcome-focused!!

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Opportunities, Differentiation, and Problem-Solving

1

Rising Demand

A growing market for personalized and AI-driven educational solutions.

2

Engagement Gap

Addressing widespread student disengagement in traditional EdTech platforms.

3

Data for Educators

Providing actionable, data-driven insights to empower educators.

AI Personalization + Gamification

A unique blend of adaptive AI and engaging game mechanics, including a Pokémon-style MCQ battle system.

Dynamic Adaptation

Real-time difficulty adjustments based on individual performance, ensuring optimal challenge.

Weak-Point Detection

AI-generated summaries and intelligent identification of learning gaps.

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Core Features: Student & Educator Experience

For Students (MVP)

- Gamified Learning Environment
- AI-Based Learning Personalization
- Content viewing optimization
- Difficulty modifier
- Personalized reinforcement timelines
- AI summarization & weak-point identification
- AI Assistant

For Educators

- Custom Game Editor (auto-generates gamification)
- Content Editor (text and video)
- Student Tracking Dashboard
- AI summaries & performance statistics
- Identification of common roadblocks
- Custom Certification (AI-based auto-generation)

Google Technologies used in the solution

Frontend: Flutter

Cross-platform development for seamless user experience.

Backend: Golang

High-performance and scalable server-side operations.

Database: Firebase

Real-time data storage and robust authentication.

AI & Analytics

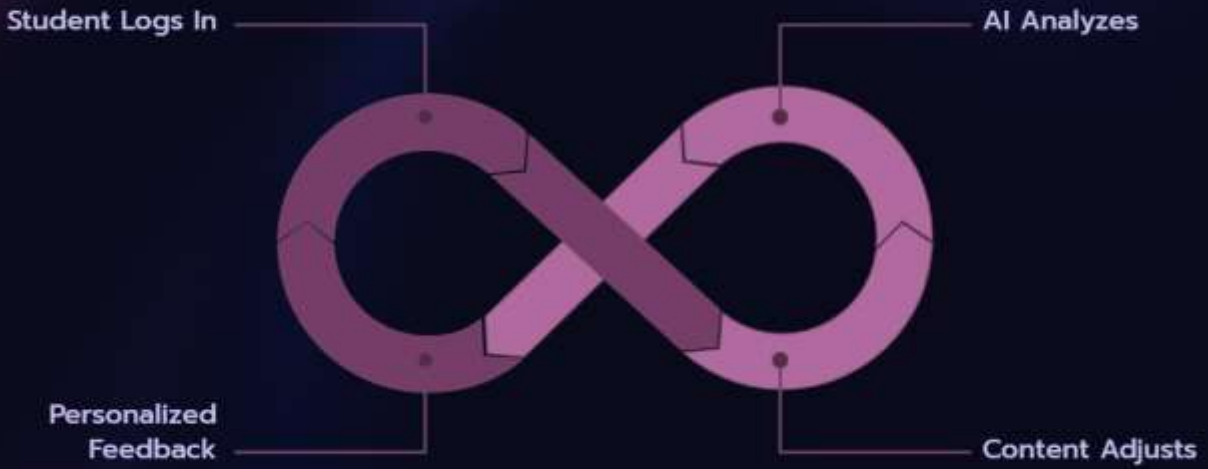
Gemini (AI Assistant & Summarization), Vortex AI (Personalization), BigQuery (Performance Insights).

Hosting: GCP

Reliable and scalable infrastructure with Google Cloud Platform.

Cognify: The Adaptive Learning Loop

Our process ensures a continuous cycle of engagement, assessment, and adaptation.



This dynamic flow ensures that each student's learning journey is uniquely tailored and constantly optimized.

Visualizing the Cognify Experience

Here's a glimpse into the key interfaces that power personalized learning and teaching.

Provide links to your:

1. GitHub Public Repository - https://github.com/U9D3RTAK3R/Cognify
2. Demo Video Link (3 Minutes) - https://youtu.be/qfJpO4ETuLw
3. MVP Link - https://cognify-deploy.vercel.app

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Thank you!