GUVI | HCL
Skill Up. Level Up

UpSkill India Challenge

Hackathon Organized by [HCL GUVI]
In association with **Techfest IIT Bombay**

Overview

The **UpSkill India Challenge** is a **national-level hackathon** organized in association with **HCL GUVI** under its flagship initiative **Mission Upskill India**. The challenge aims to **ignite innovation in educational technology** by harnessing the power of **Artificial Intelligence**, empowering participants to design transformative AI-driven solutions that redefine the future of learning and skill development.

The goal is to empower learners, teachers, and institutions by developing intelligent, scalable, and impactful AI applications that redefine how education is delivered, personalized, and evaluated.

This challenge will bring together the brightest minds in AI, software engineering, and education technology to solve real-world challenges that directly enhance the learning ecosystem.

Aim

To build AI-powered educational systems that enhance **engagement, assessment, and accessibility** through innovation and real-world applicability.

Hackathon Structure

The hackathon will be conducted in **three major rounds**:

Round 1 – Problem Selection and Presentation:

Objective:
Teams choose one of the provided problem statements, research deeply, and present their understanding, technical feasibility, and proposed solution.

Deliverable:

A **video presentation (≤5 minutes)** covering:

- Problem understanding
- Proposed approach and architecture
- Key innovation or differentiator
- Technical feasibility and scalability
- Team composition and skill roles
- Preliminary roadmap (tech stack, milestones)

Evaluation Criteria:

Criterion	Description	Weightage
Problem Understanding	Depth of problem insight and clarity	25%
Innovation	Uniqueness and creativity of proposed idea	25%
Feasibility	Practicality, scalability, and technology stack	25%
Presentation	Clarity, structure, and communication	15%
Team Strength	Role clarity, collaboration potential	10%

Output:

Top teams shortlisted for Round 2.

Submission Process:

You must submit your presentation either to **jaya@techfest.org** or through the **Google Form** that will be shared just before the submission deadline on the **email ID used during registration**.

Please **keep checking your inbox** regularly for updates and submission details.

Joining the WhatsApp group is mandatory for submission announcements and important updates — the link is available on the **competition page** of the Techfest website.

Round 2 – Development Phase (Prototype Building)

Objective:
Teams begin implementing their solution, aiming for 60–80% completion with a functional prototype demonstrating the core AI and application logic.

Duration:
3 weeks (Remote with mentorship)

Key Milestones:

- Week 1: Setup, architecture finalization, and backend scaffolding
- Week 2: Core AI model integration / API development
- Week 3: Frontend and workflow integration
- Week 4: Feature refinement, testing, and documentation

Evaluation Criteria:

Criterion	Description	Weightage
Functional Prototype	Core AI logic and main workflow implemented	30%
Technical Depth	Architecture, model choice, optimization	25%
Usability	User experience and functionality	15%
Progress & Documentation	Version control, code quality, reports	15%
Impact Potential	Scalability and relevance to education	15%

Output:
Teams achieving 60–80% completion qualify for the **final sprint at IIT Bombay**.

Round 3 – Onsite Grand Finale (IIT Bombay)

Objective:

A **10-hour live coding and presentation sprint** at IIT Bombay. Teams finalize, polish, and present their full-fledged applications.

Activities:

- Complete feature integration
- Final testing and debugging
- Prepare live demo and pitch
- Present to judges (industry experts and academia)

Evaluation Criteria:

Criterion	Description	Weightage
Functionality	Completeness and reliability of the solution	25%
AI Integration	Depth, originality, and performance of AI model	25%
Innovation	Uniqueness and problem-solving creativity	20%
Educational Impact	Real-world usability and learning benefit	15%
Scalability & Presentation	Tech scalability, deployment plan, demo quality	15%

Final Presentation (25–30 mins total):

- **Product Overview:** Problem, solution, users, and innovation (5 mins**)**
- **Live Demo**: Working prototype demonstration (10 mins)
- **Technical Deep Dive:** Architecture, AI model, scalability (5 mins)
- **Impact & Sustainability:** Educational outcomes, future roadmap (5 mins)

Q&A: Judges' interaction (5 mins)

Awards: Winners will be declared post-presentation.

Problem Statements

1. AI Quiz Portal (Platform Replication(like Kahoot) with AI Quiz Generation)

Goal:
Design and develop an **online quiz platform** that enables **real-time quiz participation**, **live leaderboard tracking**, and **one-click AI-based quiz creation** for learners, educators, and organizations.

Description:
In today's fast-paced digital learning environment, quizzes play a vital role in engagement, assessment, and skill evaluation. However, existing quiz tools often lack interactivity, automation, and scalability. This challenge focuses on building a **next-generation quiz platform** that blends **AI intelligence**, **real-time engagement**, and **seamless user experience**.

Requirements:

- Host live multiplayer quizzes
- Real-time scoring and leaderboard updates
- Admin dashboard for quiz management
- AI feature: Auto-generate quizzes from text, PDFs, or topics
- Scalable backend (microservices preferred)
- Responsive and smooth frontend (React preferred)

Bonus:

- Analytics dashboard
- Adaptive quiz difficulty using AI
- Integration with speech-based questions

Expected Outcome:
A **fully functional prototype** that allows users to:

- Create quizzes using AI in seconds
- Host and join real-time sessions
- Compete on a live leaderboard
- Analyze performance post-quiz

Impact:
Such a platform can revolutionize **edtech engagement**, **corporate learning**, and **hackathon/game-based learning environments** by merging **AI automation** with **real-time interaction**.

2. Mentor Scoring AI

Goal:
Develop an **AI-driven system** that can **evaluate the teaching quality and effectiveness** of mentors or instructors based on their **recorded video sessions**.

Description:
In large-scale education and training ecosystems, assessing the **quality of teaching delivery** across numerous mentors is a major challenge. Manual evaluation is subjective, time-consuming, and inconsistent. This problem statement focuses on creating an **AI-powered evaluation framework** that can **analyze recorded mentor videos** to assess key teaching metrics such as **clarity, engagement, tone, pacing, and content delivery**.

Requirements:

- Accept video input (recordings of teaching sessions)
- Analyze communication clarity, engagement, technical correctness, confidence, and interaction quality
- Provide a teaching score with parameter-wise breakdown
- Use multimodal analysis (audio, visual, text if available)

Bonus:

- Bias mitigation
- Comparative dashboards (top mentors, weak areas)
- Explainable AI outputs

Expected Outcome:
A **prototype system** that can autonomously assess mentor performance from recorded sessions, generate **AI-based evaluation reports**, and help institutions **enhance training quality and consistency** across their educator network.

Impact:
This innovation can transform **educator evaluation and upskilling** by offering an **objective, scalable, and data-driven** assessment mechanism—empowering institutions to **improve teaching quality** and learners' overall experience.

Evaluation Metrics:

Engagement (20%), Communication (20%), Technical Depth (30%), Clarity (20%), Interaction (10%)

3. AI Mock Interview Platform

Goal:
Build an **AI-powered interviewer application** that can **conduct mock interviews in real time**, evaluate candidates' responses, and provide **instant, personalized feedback** to help them improve.

Description:
Preparing for interviews can be stressful, and human-led mock interviews are often limited by availability, bias, and scalability. This challenge aims to create an **AI-driven mock interview platform** that simulates realistic, domain-specific interviews — offering candidates a chance to **practice, analyze, and enhance** their communication, confidence, and technical knowledge through **real-time interaction** with an AI interviewer.

Requirements:

1. Real-time audio-based conversation with AI

2.Role-specific interview modes (e.g., ML Engineer, Data Analyst, etc.)

3. Evaluation feedback:

- Communication
- Technical correctness
- Confidence and fluency

4. Auto-generated improvement plan and suggested learning materials

Bonus:

- Support for voice and video interviews
- Integration with resume parsing and personalized feedback
- Multi-round interview simulation

Expected Outcome:
A working prototype where users can **attend AI-led interviews**, receive **real-time evaluation and scoring**, and gain **actionable feedback** to enhance their performance.

Impact:
The solution empowers students, job seekers, and professionals to **practice interview skills anytime, anywhere**, making **AI-assisted career readiness** accessible, scalable, and personalized.

Eligibility & Team Composition

- Open to all students with valid institutional ID
- Teams can include members from different colleges
- Maximum team size: 4 members
- Cross-domain teams (AI + frontend + backend + design) are encouraged

Competition Timeline

Date	Event
12 November 2025	Registration Deadline
12–15 November 2025	Round 1: Idea Presentation
17 November 2025	Shortlisting of Round 1 Teams
18 November -11 December 2025	Round 2: Development & Prototype Submission
13 December 2025	Finalists Announcement
21 December 2025	Round 3: Onsite Finale at IIT Bombay [10 hours Live Sprint]
22 December 2025	Award Ceremony

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Rules & Regulations

1. Each team must register before the deadline.
2. Only original work is allowed — plagiarism will result in disqualification.
3. Submissions after deadlines will not be considered.
4. All code and documentation must be uploaded to the provided repository link.
5. Judges' decisions are final and binding.
6. Teams must maintain version control (GitHub link mandatory).

Deliverables Summary

Round	Deliverable	Format
1	5-minute problem understanding and proposal video	MP4 / YouTube link
2	Working prototype (60–80%) + documentation	GitHub link + Report
3	Final solution demo + pitch deck	Live presentation