HackOrbit 2025

Team Name:
Tech Devils

THEME & PROBLEM STATEMENT

Theme:

Empowering rural education through affordable AI-powered learning tools.

Problem Statement:

Students in underserved and remote regions often face barriers such as inconsistent teaching quality, language differences, and limited internet connectivity. These challenges hinder their access to personalized and effective learning methods, making it harder to keep up academically

PROPOSED SOLUTION

To bridge this gap, we propose a compact, AI-enabled learning assistant that works even without internet access. It provides lessons tailored to each student's learning pace and style, using lightweight machine learning models. Delivered through a simple web interface and powered by a Python backend, the system ensures that quality education reaches every learner—anywhere, anytime.

FLOWCHART / DIAGRAM

Student

⬇

HTML / CSS / JS Frontend

⬇

Flask API (Python Backend)

⬇

Scikit-learn ML Engine

⬇

SQLite Database

⬆

Learning Content Module

FLOWCHART / DIAGRAM

- The student begins interaction via a web-based interface built using HTML, CSS, and JavaScript.
- Inputs (like quiz responses) are passed to a Python-based Flask API.
- The backend invokes Scikit-learn to assess progress or suggest next steps.
- SQLite is used to record learning outcomes locally—no internet required.
- Based on past performance, new content is pulled and displayed to the learner, completing the feedback loop.

FEATURES AND NOVELTY

- Works offline for continuous learning, even in low-connectivity regions.
- Adaptability: Customizes difficulty and content for each learner.
- Lightweight tools like Scikit-learn and SQLite make the system resource-efficient.
- Multilingual capabilities with optional TTS integration.
- Friendly interface using HTML/CSS/JS for easy access on basic devices.

DRAWBACK AND SHOWSTOPPERS

- Basic machine learning is limited

It can personalize a little, but not as deeply as advanced AI models like ChatGPT.

- Voice tools may make mistakes

If there's noise around or different accents, voice features might not work perfectly.

- Content preparation takes time

You'll need to collect or create the learning material manually, which can be slow.

- Old or low-end devices may lag

On slower phones or computers, the app might not run smoothly if it's too advanced.

TEAM NAME

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Thank you