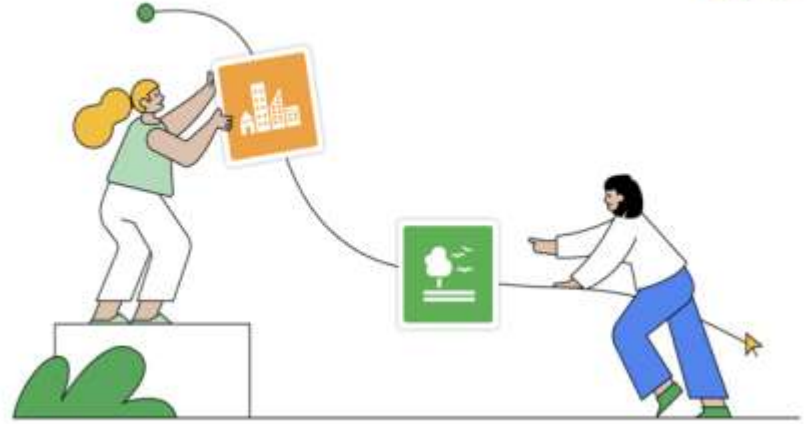Solution Challenge

Team Details

a. **Team name:** PIXEL FLOW
b. **Team leader name:** GOIRIK BHATTACHARJEE
c. **Problem Statement:** Lack of Access to Quality Education in Underserved Communities

Brief about your solution

- We are developing a web-based educational platform '***Vedic Vision'*** designed for all **students of Classes 1-10** following the latest **CBSE** syllabus.

- This platform offers a **student dashboard** to track learning progress and shows the upcoming classes and subjects to provide a more personalized learning. Hence, providing a structured, subject-wise courses with an intuitive user interface.

- This platform also offers an integrated **AI-powered chatbot,** powered by **Google Gemini,** supporting **multilingual conversations** and **voice-to-text** features. This makes it accessible to a diverse range of students. This will provide real-time assistance for instant doubt clearing of concepts.

- Our solution includes a dedicated feature that allows individuals to contribute if they wish. It suggests nearby NGOs, provides direct links to their websites for easy contact, and offers map routes for convenient access.

Opportunities

How different is it from any of the other existing ideas ?

Profile Dashboard

The profile page is designed to display all upcoming subject classes in one place.
It specifically highlights the chapters of each subject that will be taught.

Additionally, there is an assignment section that allows students to submit the assignments easily.

Concise News Summaries

A dedicated section delivers well-structured, summarized news updates.

Each time the page is reopened, new updates appear.

It displays five news items at a time, ensuring concise and easily digestible information.

Integrated Learning Hub

The chatbot is positioned in the bottom-right corner of the webpage, allowing students to instantly resolve doubts while reading PDFs in the viewer.

This design ensures seamless learning without delays in grasping concepts.

AI-Powered Voice-to-Text Chatbot

The chatbot can receive and respond in the requested language providing multilingual support. Hence can address diverse audience.

It is not restricted to specific knowledge but can answer questions from any subject or topic. Additionally, it is trained to provide responses in a way that students from classes 1 to 10 can easily understand.

Getting Connected with NGOs

Our solution includes a feature that enables individuals to contribute by donating unused books.

Utilizing the user's current location, it suggests nearby NGOs and provides direct links to their websites, along with navigation assistance for easy drop-off.

This initiative aims to support underprivileged students by ensuring donated books reach those in need of free educational resources.

Opportunities

How will it be able to solve the problem ?

Our solution supports **UN SDG 4** by promoting inclusive, equitable, and lifelong learning for all.

Accessibility to Quality Educational Resources	Personalized and Inclusive Learning	Technology-Driven Learning Support	Encouraging Lifelong Learning
Provides free CBSE NCERT books and an easy-to-use dashboard for seamless learning	Offers a multilingual chatbot for real-time, age-appropriate, and subject-specific assistance.	Integrates a chatbot with a PDF viewer for instant doubt resolution without disrupting studies	Features a dedicated news section with concise updates to enhance awareness and critical thinking

.

USP of the proposed solution

✦ **No paywall required.** You can enjoy unrestricted access to all the books

✦ A **Simple UI** ensures easy understanding and engagement for students of all classes.

✦ **Open-source and scalable** for future expansion.

✦ **AI-powered chat assistant** for quick student queries.

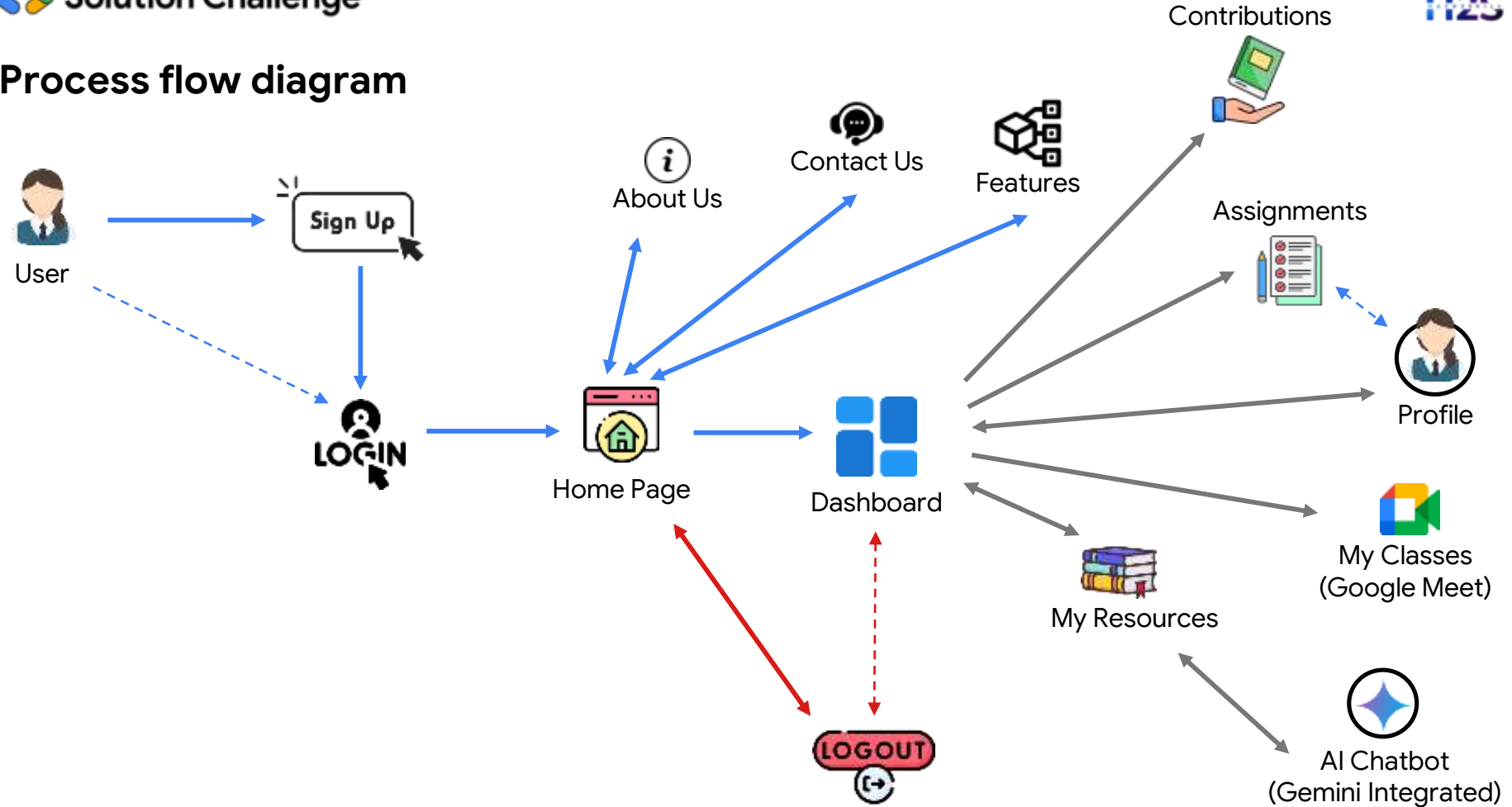✦ **Multilingual and voice-to-text support** for wider accessibility.

List of features offered by the solution

- ◆ Class-wise, subject-wise course navigation
- ◆ AI chatbot (*powered by* Gemini 2.0 Flash) for doubt-solving
- ◆ One-to-one virtual interactions using Google Meet for live classes
- ◆ Multilingual and voice-to-text support
- ◆ User-friendly interface for students of all age groups
- ◆ Profile section with student details.
- ◆ Establish a direct connection with NGOs through their sites and map directions.
- ◆ Optional contributions to NGOs to support underserved students.
- ◆ Summarized News are also available
- ◆ Gemini AI generates daily assignments aligned with the latest CBSE curriculum.
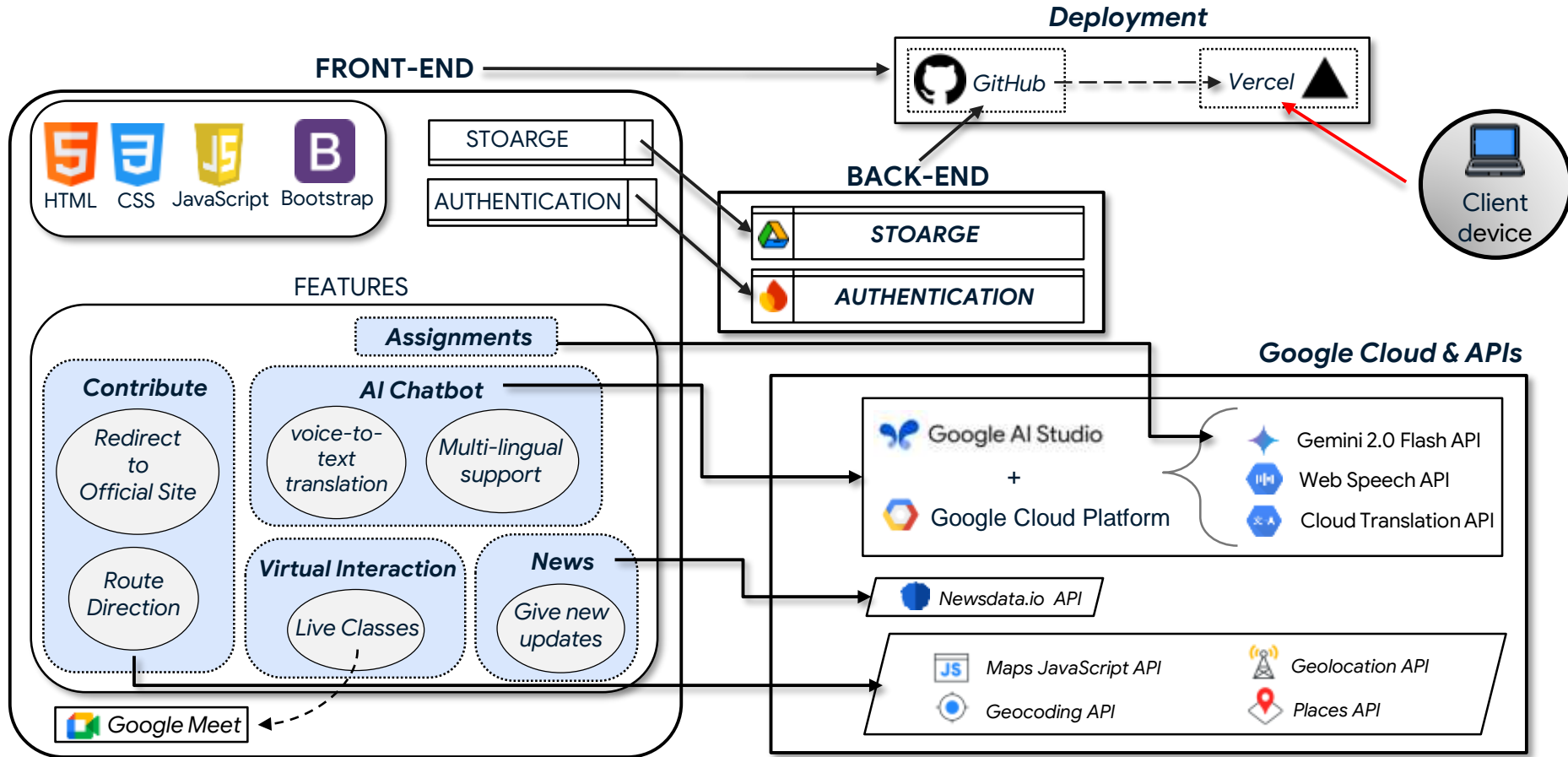
Additional Details / Future Development

- ◆ Student-created weekly timetable.
- ◆ Personalized learning experience with progress tracking.
- ◆ Image-Based Question Search using AI chatbot

Process flow diagram

Solution Challenge

Powered by
H2S

Contributions

Assignments

Profile

Features

Contact Us

About Us

User

Sign Up

LOGIN

Home Page

Dashboard

My Classes
(Google Meet)

My Resources

LOGOUT

AI Chatbot
(Gemini Integrated)

Solution Challenge

Powered by
H2S

Architecture diagram of the proposed solution

Technologies to be used in the solution

✦ **Frontend:** HTML, CSS, Bootstrap, JavaScript

✦ **Backend (Authentication):** Firebase

✦ **Database:** Google Drive

✦ **ML/AI:** Google Cloud Platform, Google AI Studio

✦ **Hosting:** Vercel

Provide links to your

✦ GitHub Public Repository : *https://github.com/adityadash149/GSC2025*

✦ Demo Video Link : *https://youtu.be/73h5wJSP3GU?si=LHIsqh4N5X8UawWv*

✦ MVP Link : *https://gsc-2025-gamma.vercel.app/*

Snapshots of the MVP