



# CellMate — Your AI-Powered Biology Lab

## Partner

### Problem Statement: Skill Sharing Marketplace-

CellMate brings the Skill Sharing Marketplace to life by acting as an AI mentor that teaches biology lab skills through interactive, curriculum-aligned simulations.



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Your AI-Powered Virtual  
Biology Lab Assistant

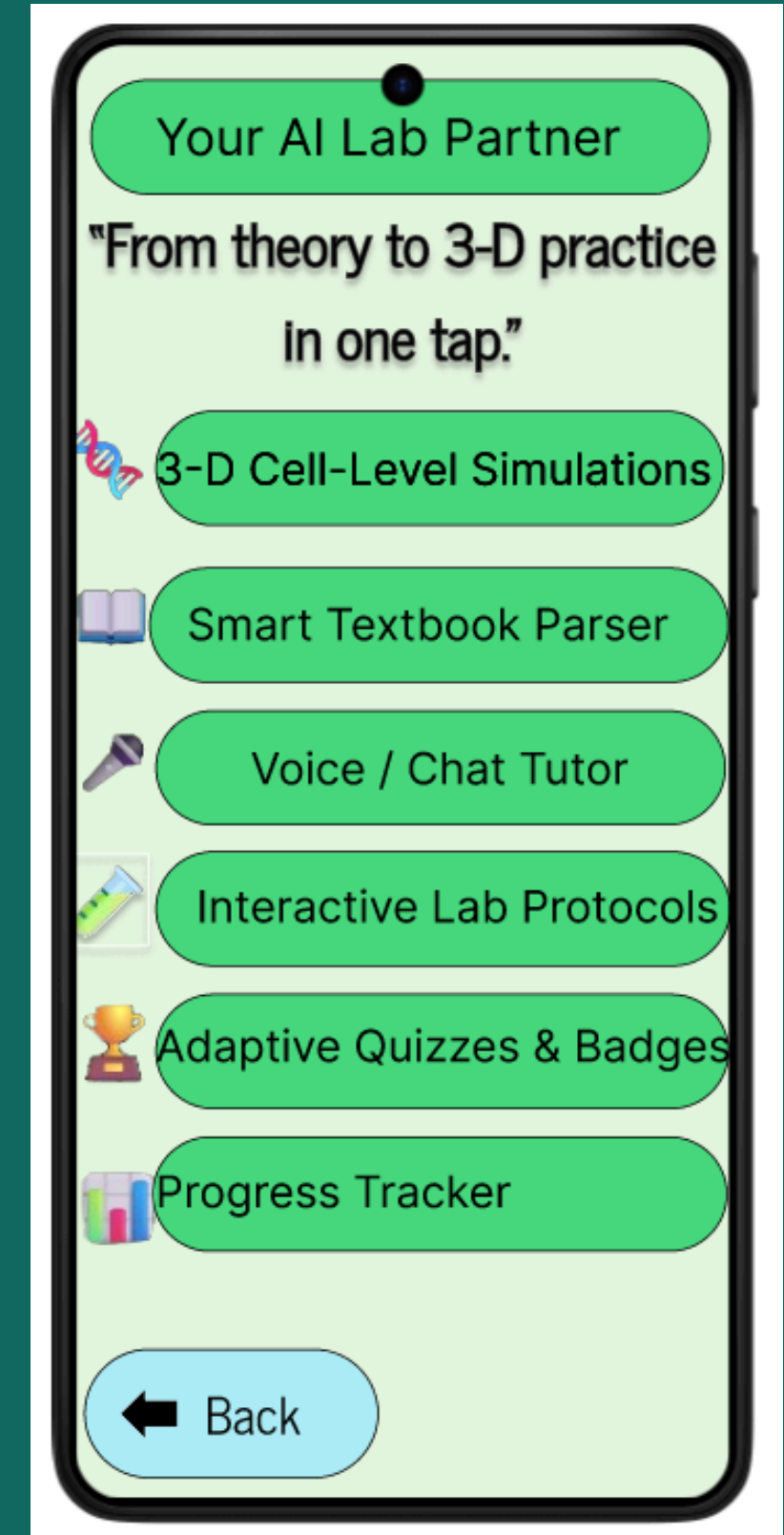


Explore Features

See Simulation

# “Why Biology Practicals Are Still a Struggle”

- Millions of students lack access to functional labs, missing out on hands-on biology learning.
- Existing tools are passive and fail to make complex experiments practical or engaging.
  - Practical biology is vital for careers in medicine, biotech, and research, but many students lack real lab exposure.
  - This gap is especially wide in rural and under-resourced schools, creating unequal learning opportunities.
- We believe science education should be immersive and accessible to all, not a privilege for few.
- Our passion is using AI to create virtual, personalized labs that empower every future scientist — anytime, anywhere.



# Our Approach — Bringing the Lab to Life with AI

## Solution Strategy:

CellMate is an AI agent that understands natural language tasks, guides students step-by-step like a tutor, runs 3D virtual labs, and generates simulations from textbook content.

## Tools & Technologies:

GPT-4 / LangChain (AI logic & tutoring)

Unity / Three.js (3D simulations)

OCR (Tesseract) for textbook parsing

Firebase / Supabase for user progress & storage

## Features:

CBSE/NEET-aligned experiments

Dual mode: Tutor + Lab Partner

Hindi & regional language support for inclusivity

