DIGI EDU HACK 2025

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AI-Powered science innovation, technology and entrepreneurship education for the future world BioBangla—For Global learners

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DigiEduHack 2025 Organising Partner

European Commission

DigiEduHack is an initiative under the Digital Education Action Plan (2021-2027) of the European Commission

TABLE OF CONTENTS

Problem

How might we solve the science, innovation, technology, and entrepreneurship learning gap through AI?

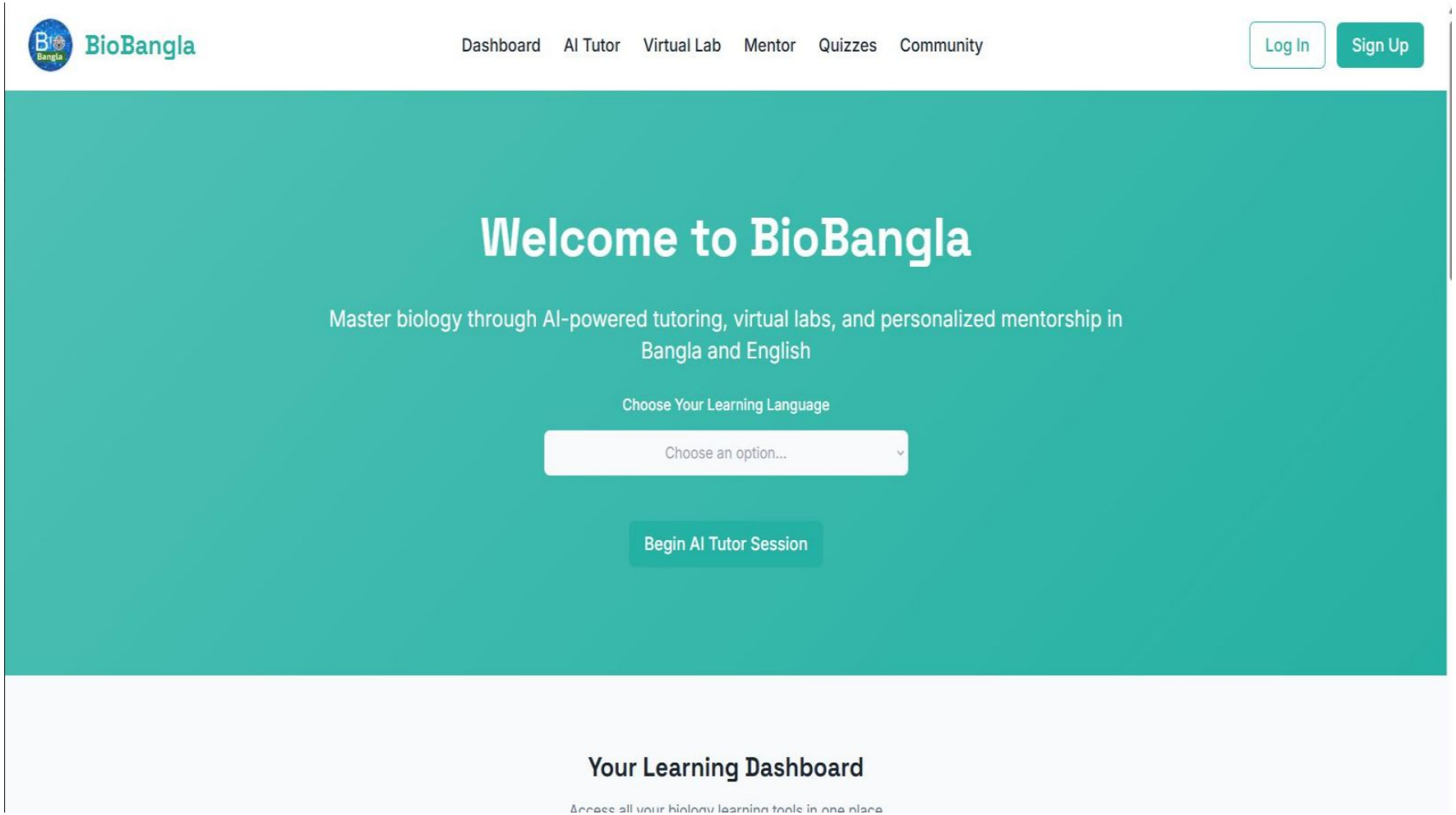
In Bangladesh, students lack access to quality education in science, technology, innovation, and entrepreneurship, limiting their skills and potential. This gap hinders both individual growth and the nation's progress in a competitive, knowledge-based economy.

According to The Financial Express, 12% of students enroll in STEM in Bangladesh, which is about 4.59 million students who doesn't have access to

- Science labs & equipment
- Expert mentorship
- Hands-on practice
- Language-friendly STEM content
- Career guidance & global access
- Biology learning is still textbook-based and unequal.

DEMO

BioBangla Ai assistance Biology Lessons



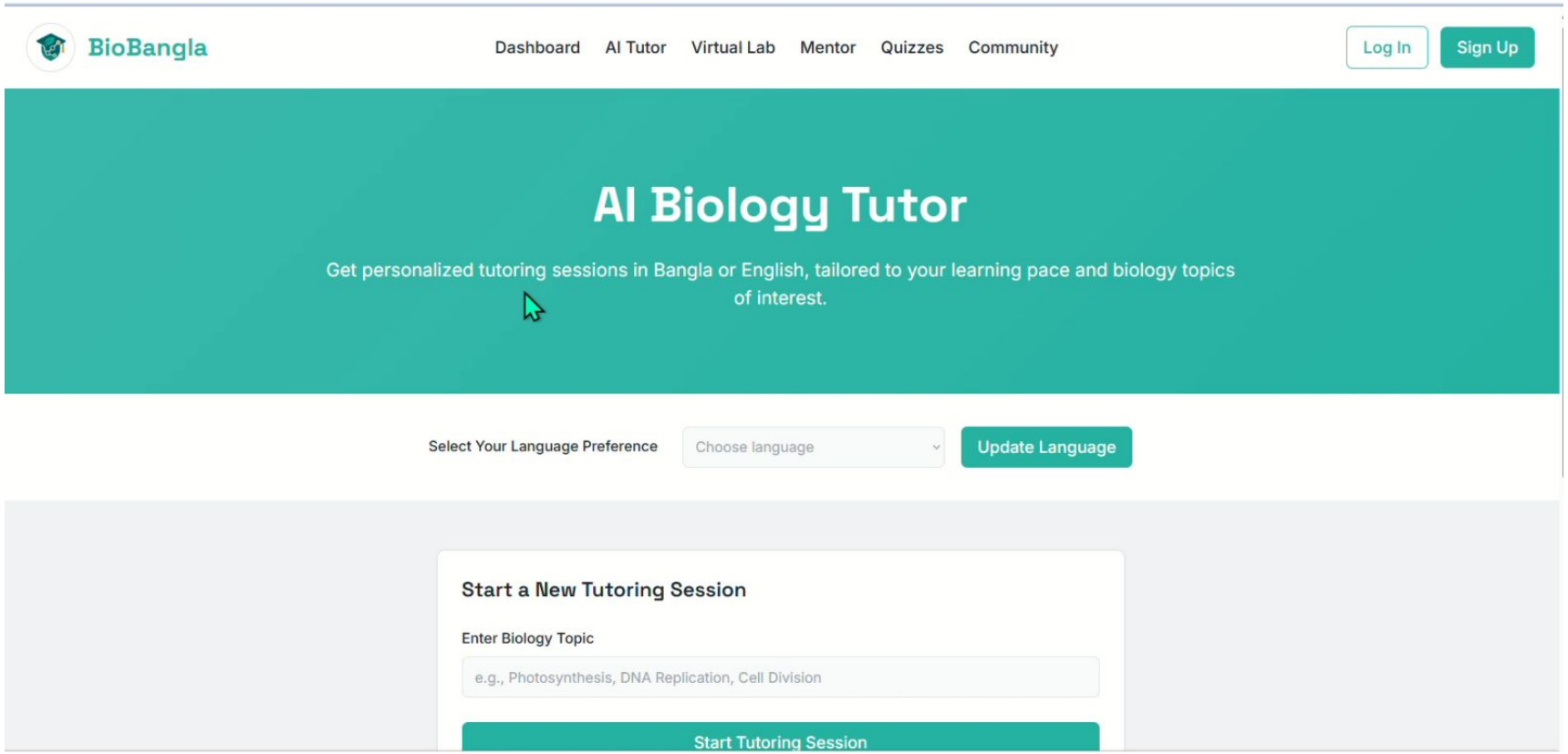
Solution

BioBangla—Human + AI Science, Innovation, Technology and entrepreneurship Learning Platform

- AI Biology Tutor (Bangla & English) - *Demo Prototype*
- Virtual Biology Lab
- AI assistance for entrepreneurship project
- AI chatbox for Science
- Quiz & Study Tools for Innovation projects
- Community & Challenges

DEMO

BioBangla Ai assistance Biology Lessons



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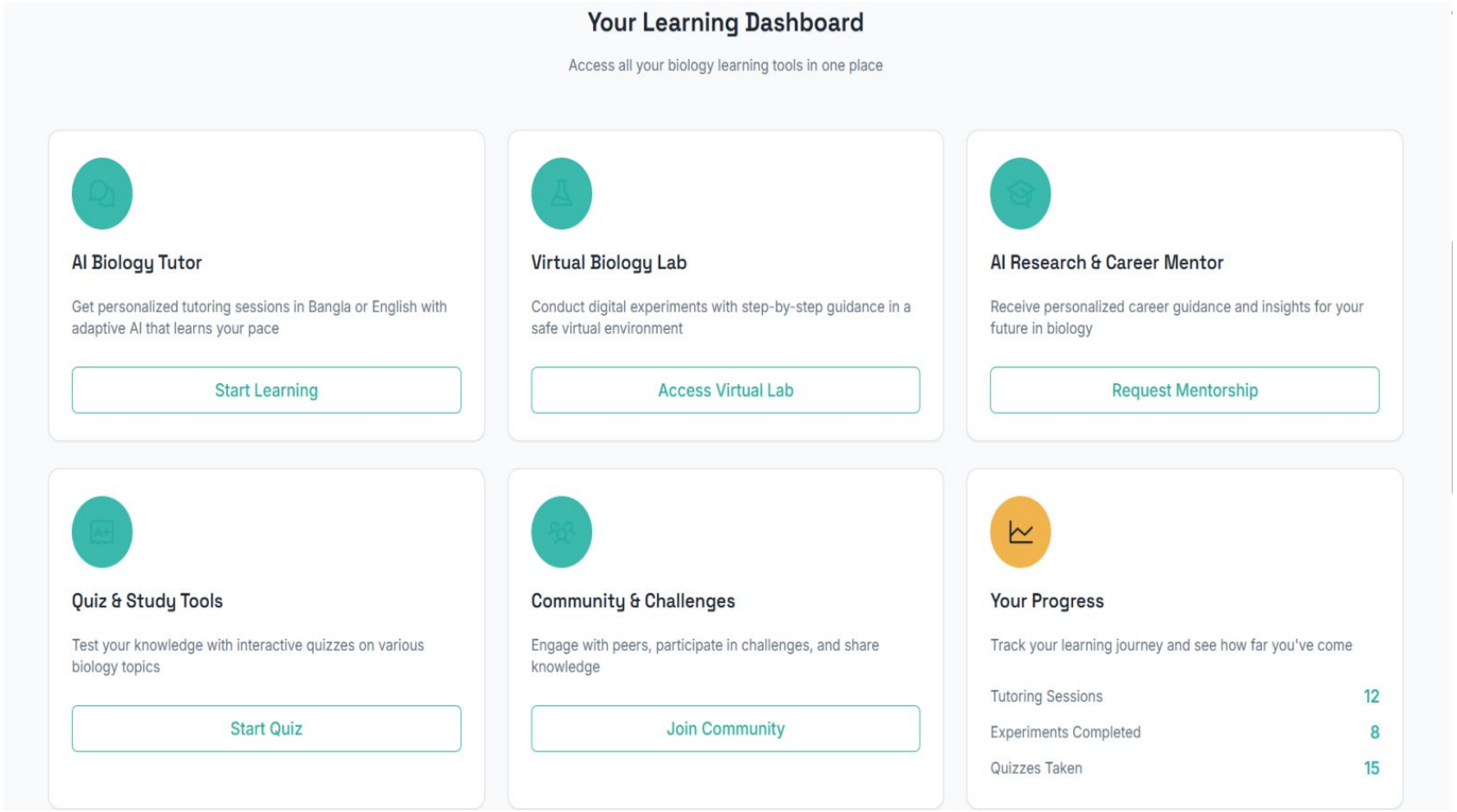

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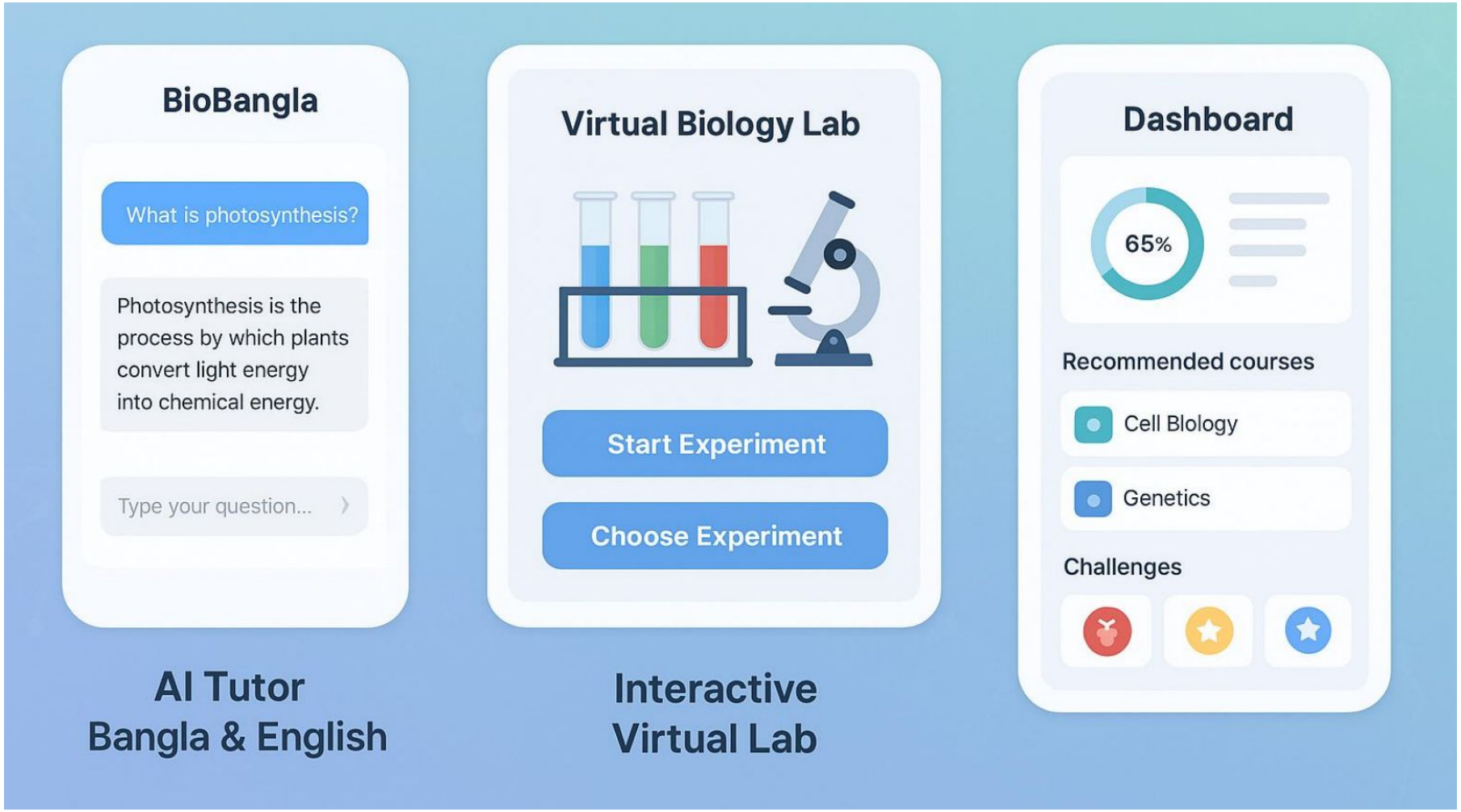


Timeline

BioBangla Prototype and fundraising Goal

February 2026
Website launch
MOOCs available

May
Feb

June
3 course will be online on the website

July
July

August
First customer acquisitions

September
September

October
Marketing

6-13: DigiEduHack days!
November

December
Prototype TRL 9 with lessons

Public voting
January

February
Impact investment about 150k

Team

We have strong team to accomplish the BioBangla task.

Mohammad Borat Hossen Sohad.
- BioBangla Team

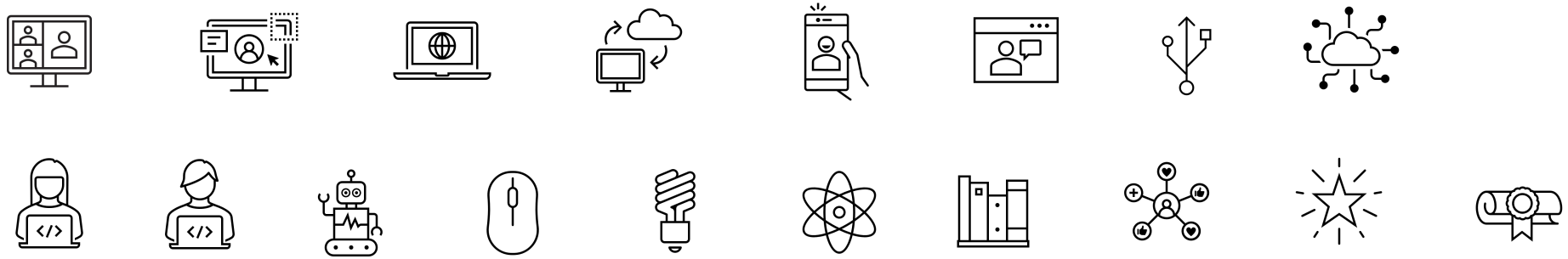
Hossain Mohammad Masum - BioBangla Team

Md Abdul Mazid Tanvir - BioBangla Team

ADDITIONAL GUIDELINES

DigiEduHack Visual Identity

Elements that can be introduced in presentations:



Color palette:

#8A88FF #FF578F #9B00A9

Fonts:

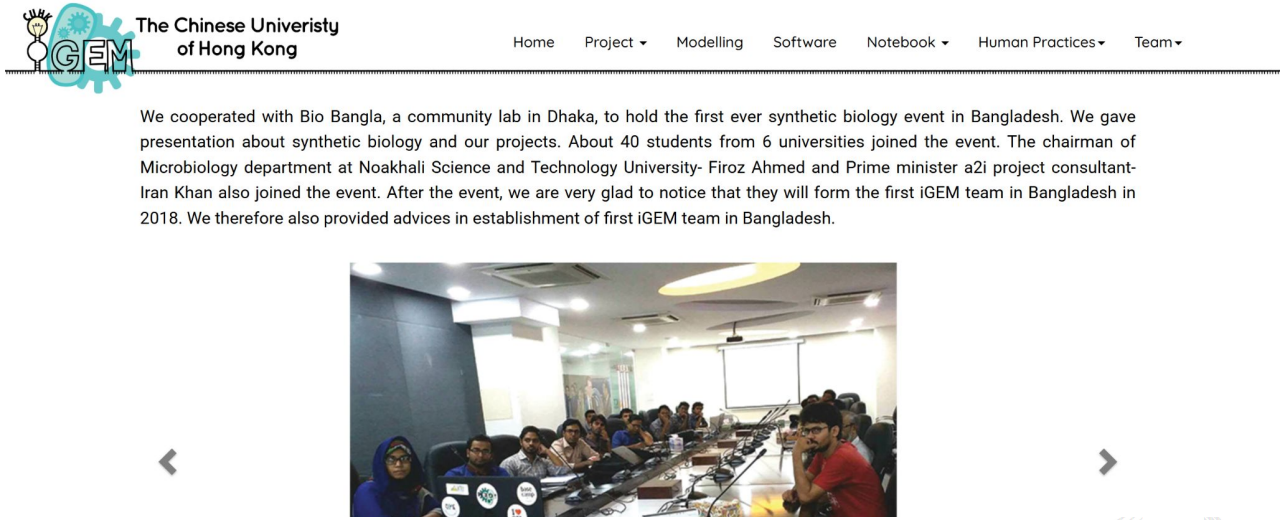
- Titillium Web // Calibri

IMPACT

We believe in impact and we are committed to follow SDG goal

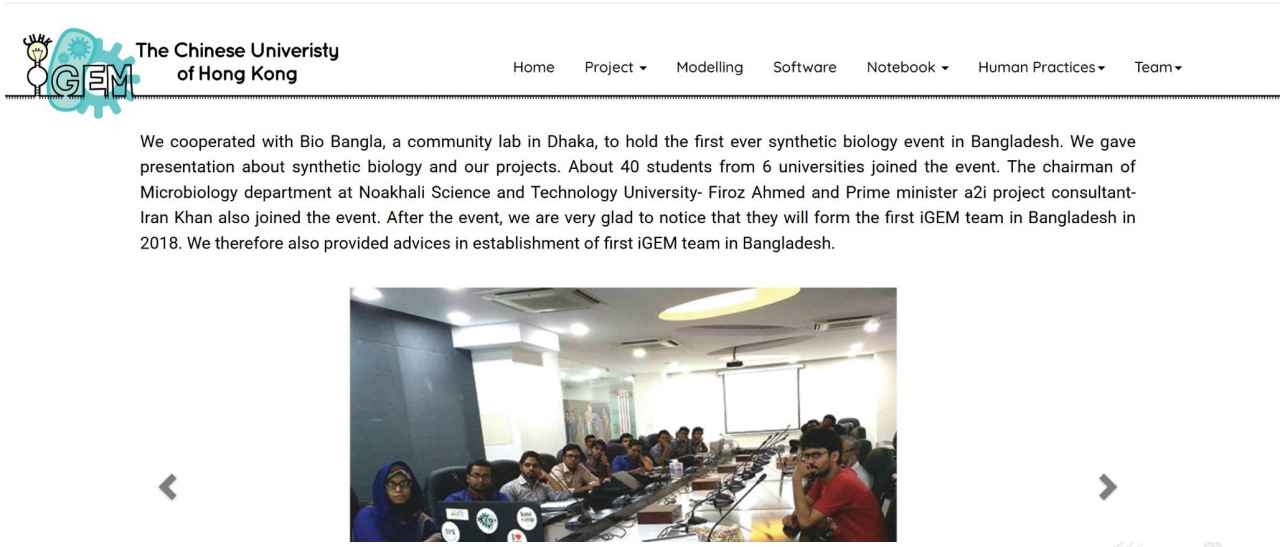
Through BioBangla, we have organized over 150 workshops and training sessions on bioengineering, synthetic biology, startups, and entrepreneurship. Throughout this journey, we have collaborated with The Chinese University of Hong Kong and the Government of the People's Republic of Bangladesh. To date, more than 2,000 participants have received training through our platform.

We aim to create a greater impact by integrating AI into BioBangla, which will help us scale our reach and enhance our capacity simultaneously.



WHY NOW

- AI is transforming education
- Biology & biotech are future-critical.
- South Asia has huge learner demand
- Language accessibility gap
- Digital labs democratize science



BioBangla

BioBangla Pitch Video Link

https://youtube.com/shorts/6BajiiCRlpo?si=dNY5l1-q7d2exJBe

BioBangla

Social media activities

Social Media Links :

- https://www.facebook.com/biobanglapage/
- https://www.linkedin.com/company/biobangla1/?viewAsMember=true

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DIGIEDUHACK SOLUTION CANVAS

Title of the solution: BioBangla AI powered platform

Team name: BioBangla

Challenge addressed: Empower Science & Entreprenuership through AI

Challenge category: Human + AI in Education 2025 (2025)

Background of the team:

(multiple selections possible in case of mixed teams)

Higher Education Students | **Researchers** | **Professionals**

Teachers | **Primary School Students** | **Secondary School Students**

Others (please specify): Non-Profit organization

Solution description

What is the final product/service/tool/activity you're proposing? What are its main elements, technologies and objectives? Could you please include a brief implementation plan with some key overall milestones, resources required and eventual barriers foreseen?
How could your solution be used to enhance digital education nowadays? How could its success be measured?

We are a service-based platform empowering education through AI.
At BioBangla, we promote science communication, innovation, technology, and entrepreneurship to inspire the next generation of learners and thinkers.

Our main goal is to support underprivileged students who have limited access to world-class training and facilities in the field of STEM.

We believe in creating real impact, and since 2017, we have contributed to science education and community development.
Now, with the power of AI, we aim to scale our efforts globally — enabling more learners to access quality education, hands-on learning, and future-ready opportunities.

Context

What is the current or future problem you're trying to solve? How does your solution align with DigiEduHack 2025 annual theme?
How does your solution confront the challenge posed by the hackathon organiser and how does it address the challenge category?

BioBangla aims to solve the lack of access to quality science education, labs, and mentorship — especially in developing regions. Our AI-powered platform makes biology learning interactive, bilingual, and globally accessible.

It aligns with DigiEduHack 2025s theme Human + AI in Education by envisioning an inclusive, AI-driven education system that prepares learners with future-ready STEM skills and supports their well-being.

Our solution directly addresses the challenge by combining human empathy with AI intelligence to create personalized, hands-on, and equitable learning for all.

Target group

Who is/are the target group/s of your solution and how will they benefit from it? Why is your solution relevant to them? how do you plan to engage these groups so you fully meet their specific needs?

Our target groups are bachelors, masters, and PhD students who will directly benefit from our hands-on training programs in areas such as Python, entrepreneurship, pandas, synthetic biology, genome editing, and more.

We have already identified a significant gap between academia and industry. According to our market research, this field represents a 50-billion-dollar global market, and we have the opportunity to work within a 10-billion-dollar segment. We plan to reach our customers through a B2B model, collaborating with educational institutions and organizations to deliver impactful AI-driven learning experiences.

Impact

How will your solution catalyse changes in education and what impacts will it have at social and environmental level? Could you provide examples or scenarios illustrating how such changes and impacts might unfold?

Our platform empowers the young generation by providing practical training that makes them more skilled and future-ready leaders. We believe in creating impact, and our BioBangla project is aligned with the United Nations Sustainable Development Goals (SDGs).

Many students who have participated in our training programs are now studying abroad and pursuing careers in science and entrepreneurship. Our training helps them build strong scientific, innovative, and entrepreneurial foundations, accelerating their personal and professional growth.

We have already achieved meaningful traction, which can be seen on our official page and website.

Describe it in a tweet

How would you describe your solution in a short catchy way with maximum 280 characters?

BioBangla — an AI-powered science learning platform that blends human mentorship with intelligent tutoring.
It turns biology education into an interactive, bilingual, and accessible experience — empowering future scientists anywhere in the world.

Innovativeness

What makes your solution different and original? Are there similar solutions or approaches currently available or implemented by education sector practitioners? If so, why and to what extent is your solution better?

Most existing EdTech tools focus on general subjects or English-only learning. BioBangla stands out by combining AI , local language , virtual biology labs, offering hands-on science learning for everyone.

Unlike typical AI tutors, BioBangla blends human mentorship,Bangla-English bilingual learning, and career guidance, making it accessible, culturally inclusive, and future-ready. It transforms passive textbook learning into interactive, experimental, and personalized science education something few global platforms provide today.

Transferability

Can your solution partly or fully be used in other education/learning contexts or disciplines? Could you provide any example?

While BioBangla focuses on biology first, its AI, human learning model can be adapted for other subjects like physics, chemistry, mathematics, and environmental science.

For example, the same virtual lab and AI tutor framework could simulate physics experiments, explain chemical reactions, or create AI-generated math practice sessions in multiple languages — making it a scalable solution for all STEM disciplines.

Sustainability

Once you have a prototype, what are your plans for a further development, implementation upscale and replication of the solution? How do you see it working in the mid- and long term?

Once the prototype is ready, we plan to pilot BioBangla in schools and universities in Bangladesh to gather user feedback and refine the AI tutor and virtual lab.

In the mid-term, we aim to expand regionally across South and Southeast Asia with multilingual support (Hindi, Nepali, Indonesian, etc.) and partnerships with educational boards and NGOs.

In the long term, BioBangla will evolve into a global AI-driven science learning network, integrating advanced simulations, personalized career pathways, and teacher collaboration tools — making hands-on, inclusive science education accessible worldwide.

Team work

Present the members of your team.
Why are you the perfect team to develop this work and what are the competencies you all bring in so the solution is developed successfully? What is your expertise within the thematic field concerned? Are you planning to continue working as a team in the future? If so, why?

Our team combines expertise in AI, biology education, and digital innovation, making us the right mix to bring BioBangla to life.

Mohammad Borat Hossen Sohad (Developer): CSE student passionate about AI and EdTech innovation; leads the platform design, AI integration, and digital strategy.
Hossain Mohammad Masum(Biology Mentor):
Guides accurate and curriculum-aligned biology content.

Md Abdul Mazid(UI/UX Designer): Ensures the learning experience is intuitive and engaging.

Community & Outreach Lead: Focuses on partnerships with schools, students, and educators.

Together, we unite technical skills, scientific understanding, and a deep purpose to democratize education.
Yes — we plan to continue as a team to expand BioBangla globally, building an AI-powered ecosystem that makes science learning equal for all.

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