

# DIGIEDUHACK SOLUTION CANVAS

**Title of the solution:** 
**Challenge addressed:** 
**Background of the team:**

(multiple selections possible in case of mixed teams)

**Team name:** 
**Challenge category:** 
**Higher Education Students**
**Teachers**
**Others** (please specify) 
**Researchers**
**Primary School Students**
**Professionals**
**Secondary School Students**

## 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're proposing a mobile learning experience where kids scan real foods to generate AI-powered creatures whose appearance and stats reflect their nutritional value and environmental impact. The core of the tool relies on Open Food Facts as our public data source and OpenAI to create creature designs and short educational insights. Our current Figma prototype outlines the full flow; turning it into a React Native app with a small backend would be the next step. Key milestones would include implementing scanning, connecting the APIs, and building a simple creature-collection loop. Required resources include development time, API credits, and lightweight hosting, while challenges include performance, cost management, and keeping the experience intuitive for young users.

This solution enhances digital education by teaching nutrition through hands-on interaction rather than passive reading. Kids practice scanning, interpreting data, and experimenting with ingredients, building both digital skills and food literacy. Success can be measured through engagement with the prototype, the variety of foods scanned, and improvements in basic nutrition understanding after using the tool.

## Context

What is the current or future problem you're trying to solve? How does your solution align with DigiEduHack 2024 annual theme?

How does your solution confront the challenge posed by the hackathon organiser and how does it address the challenge category?

We aim to address a growing problem: the rise of obesity among children and teenagers, partly driven by a lack of engaging and accessible nutrition education. Our solution rethinks how young people learn about food by turning everyday ingredients into an interactive, digital learning experience. This aligns directly with the DigiEduHack 2025 theme, "Rethinking education in the age of digital skills," by using AI, data exploration, and playful experimentation to teach essential health knowledge. Kids learn by scanning foods, generating creatures, and comparing their real nutritional profiles building digital literacy while understanding healthy habits. Our project meets the organiser's challenge by leveraging Open Food Facts as our public data source and OpenAI as our AI tool to create visuals and insights from the food information. This combination transforms static nutritional data into an engaging, gamified ecosystem that helps young users understand the impact of their choices. In doing so, our solution fits squarely within the challenge category: a digital, low-barrier educational tool that encourages healthier lifestyles through creativity, technology, and hands-on learning.

## 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 primary audience is children and teenagers. By turning nutrition into a playful experience, we make healthy eating habits easier to understand and more engaging for younger users. Our mobile game invites them to experiment: combining foods to create beasts, comparing their "health scores," and discovering how different choices affect the strength of their beasts. They can fight JunkFood beasts with attacks that stem from the good nutrients in the items their beast is composed of.**

**Beyond basic nutrition, the experience introduces a less obvious but essential idea: the environmental impact of food processing. By encouraging users to create nature-friendly ingredients and watch their island evolve, we spark curiosity about sustainability in a way that feels natural and fun. We plan to keep these groups engaged through interactive challenges, visual feedback, and a progression system that rewards exploration and learning.**

## 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 solution supports education by turning nutrition and sustainability into an experience kids actively explore rather than passively consume. Instead of memorizing facts, they learn by experimenting: scanning foods, creating creatures, comparing their health scores, and seeing the environmental impact of their choices. This transforms abstract concepts into something concrete, visual, and fun.**

**Social impact:** Children develop healthier habits early on. They become more aware of what they eat, why it matters, and how choices shape their well-being. Because the app is playful and non-judgmental, it makes conversations about food easier for families, teachers, and youth groups.

**Environmental impact:** The game subtly teaches the link between food processing and environmental footprint. When kids choose less processed, more sustainable ingredients, their island becomes greener and their creatures stronger. This creates an intuitive understanding of sustainability without feeling like a lecture.

**Example scenario:** A student scans their lunch and realizes a homemade sandwich produces a far "healthier" creature than a heavily processed snack. Curious, they experiment the next day with fruits or vegetables and see their island evolve. At school, classmates compare creatures and start discussing which foods are "stronger" and why, turning nutrition and environmental literacy into a social, collaborative experience.

**Mid-term impact:** Over time, these playful interactions build genuine awareness. Kids start making more mindful choices, parents get involved, and educators gain a modern tool to spark discussions about health and sustainability in a positive, motivating way.

## Describe it in a tweet

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

Forget everything you've learned... today we're playing with food! Turn your food into fun AI-powered beasts! Scan ingredients, create unique monsters and make them battle. Learn about the health impact of what you eat, discover eco-friendly choices, and watch your island grow!

## 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?

Unlike existing apps that usually push a single way to engage, our approach offers multiple playstyles so every child can learn in their own way. Some will enjoy collecting ingredients and building the "strongest" beasts, others will focus on battles, and some will simply grow and customize their island. This flexibility makes the experience richer, more inclusive, and far more engaging than traditional health-education tools. BlendBeast feels less like a game and more like a universe!

## Transferability

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

Yes the approach can easily extend to other learning contexts. The core idea is using playful creation and experimentation to teach real-world concepts. Beyond food, the same model could apply to understanding the environmental impact of everyday products: clothing, electronics, or household items, given a reliable and complete data set. For example, students could scan objects to generate beasts representing their carbon footprint or production chain. By comparing and collecting them, they would learn about sustainability, responsible consumption, and the lifecycle of products in a way that feels intuitive and engaging.

## 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?

Right now, we have a fully functional Figma prototype. The next step is developing the real application using React Native (Expo) with a backend built on MongoDB or a similar database. The game mechanics are intentionally simple, which makes early implementation fast and realistic.

In the medium term, our plan is to release a pilot version, gather user feedback from schools or youth programs, and refine the experience based on real usage. We aim to expand the creature system, add more educational layers, and introduce small collaborative features so learning feels social.

In the long term, we see the project scaling into a broader learning platform with different themes (food, sustainability, product lifecycle, health habits). Thanks to its modular structure, the app could be replicated in multiple disciplines and adapted to different age groups, making it a flexible tool for educators and families.

## 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?

We're third-year Software Engineering students from Université Laval, and most importantly we're long-time friends who have already competed in several hackathons together. Our strong team spirit and deep familiarity with each other's strengths make us an exceptionally effective group. We bring complementary skills across full-stack development, UI/UX, architecture, rapid prototyping, and product thinking. Because we already know how each person works, collaborates, and communicates, we can move fast, solve problems creatively, and deliver polished results under pressure. We also share a genuine interest in technology, learning, and building things that help people. This project aligns perfectly with what motivates us, and yes we absolutely plan to keep working together. The trust, synergy, and rhythm we've built as a team make us confident we can carry this project much further given the opportunity!