

# BioQuest README

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## Overview

BioQuest is a cross-platform mobile application built with Flutter, designed to support students in understanding biology while providing them with personalized flashcards and quizzes to enhance learning. Users can select their avatar and explore area-based flashcards on key topics like ecosystems, ecology, cell function, etc. Topic mastery is based on a city concept where rural is low level and urban is high level mastery. Users can also ask the AI tutor to clear any of their doubts. Lastly, if there's any bugs or suggestions the user has they can give us user feedback

Our goal is to make learning biology fun and educational through an engaging, interactive, and AI-enhanced experience.

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## Features

- Responsive UI built with Flutter to work seamlessly across all devices.
  - Area-based experience: Choose between Urban, Suburban, or Rural icons (using Flutter's default Material Icons) to explore different difficulties.
  - Flashcard Generator: Flashcards generated using OpenAI's API to support interactive learning.
  - Quiz Mode: Auto-generated multiple-choice quizzes powered by OpenAI API to reinforce student understanding.
  - Interactive Avatars: Unlock avatars from a set of avatars (also Flutter Material Icons) for a personalized feel.
  - Clean navigation: Simple and intuitive design made possible by Figma planning.
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## How It Works

1. Choose Your Subtopic: Pick from twenty five subtopics on the learning map
  2. Study, Learn Adaptively, or Level-Up: Study the material, target your weaknesses, and level up to earn points and badges on rewards..
  3. Rewards: Spend your points earned answering questions on different themes, avatars, and getting hint upgrades.
  4. Review & Grow: Learn from instant feedback and improve your understanding of your environment and future planning based on the OpenAI API tools.
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## Technologies and Tools Used

- Flutter – App development
  - VS Code – Code editing
  - Podfile / CocoaPods – iOS dependency management
  - Figma – Wireframing and design planning
  - OpenAI – AI-generated flashcards and quizzes
  - DALL·E 3 – AI-generated logo for the app
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## Installation Instructions

1. Clone or download the project repository.
  2. Open the project in VS Code or Android Studio.
  3. Ensure Flutter SDK and CocoaPods are installed and configured properly.
  4. Run “flutter pub get” to install dependencies.
  5. Launch the app on a simulator or connected device.
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## Assets

- App Icons and Avatars: Default Flutter Material Icons

- App Icon: Generated using DALL·E 3
  - Wireframes: Created with Figma
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