AI- STUDY CURRICULUM GENERATOR
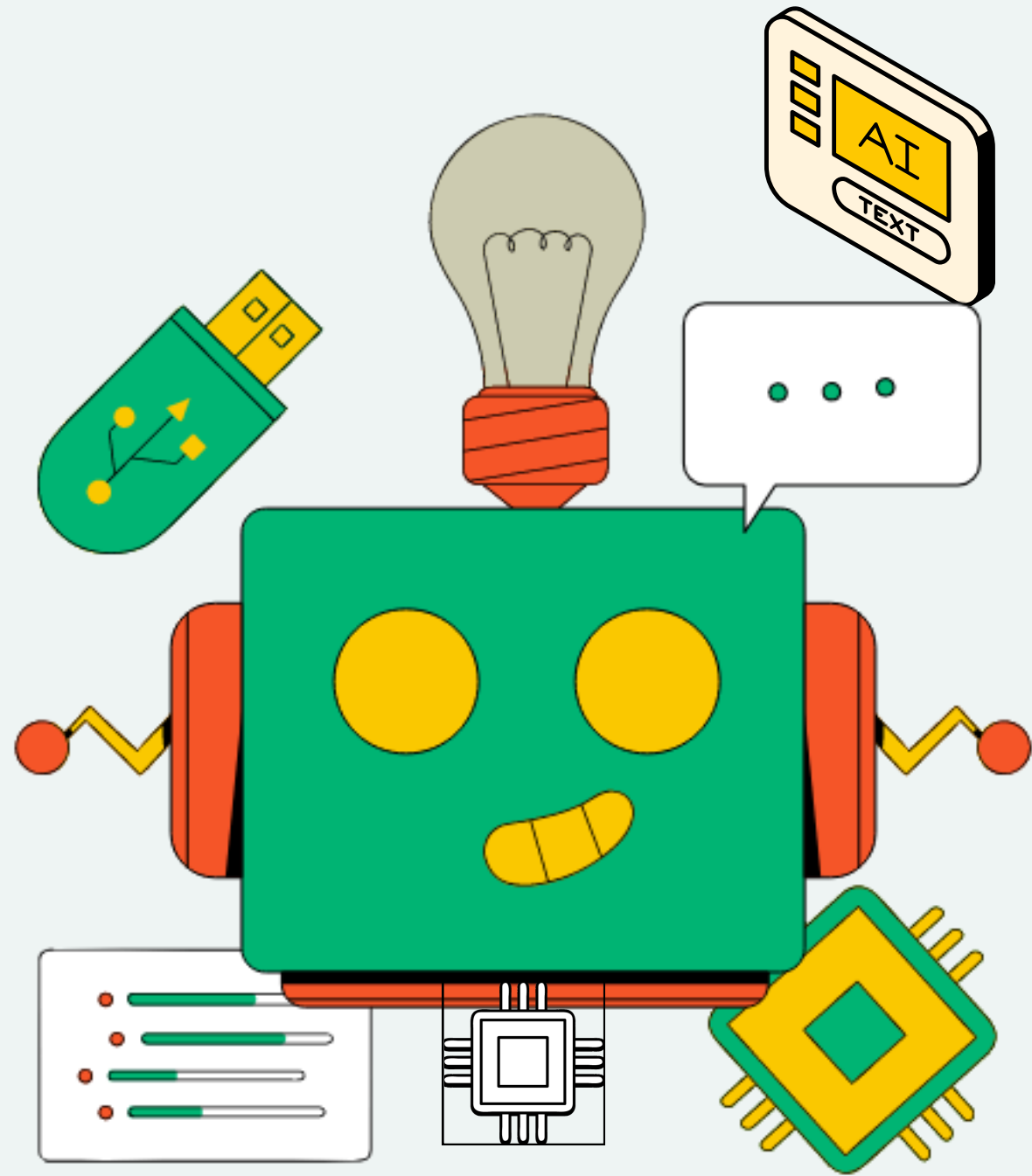
AI–Driven Curriculum Generator
A tool to empower teachers with intelligent lesson planning.
Team Name: [Team Rocket]
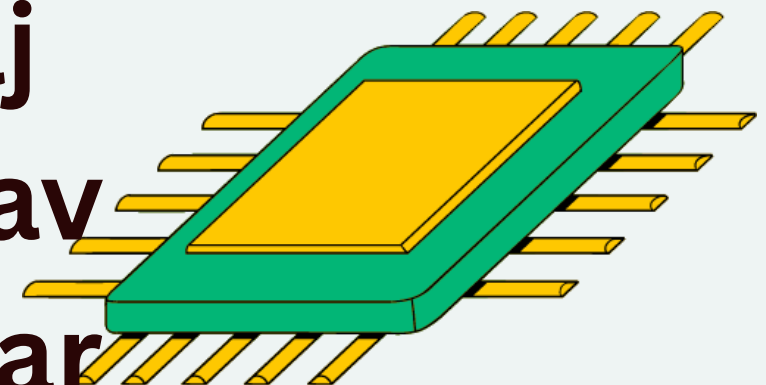Hackathon: [samadhan 2.0]
Date: [26/09/2025-27/09/2025]

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The Problem

The Challenge of Curriculum Design
Manual lesson planning is a significant time sink for educators.

- Time-Consuming: Teachers spend countless hours creating lesson plans, quizzes, and study guides from scratch.

- Static Content: Traditional curricula are often one-size-fits-all and don't easily adapt to individual student needs or new information.

- Resource Overload: Finding and organizing external resources (videos, articles, activities) is a manual and inefficient process.

OUR SOLUTION

Introducing an Intelligent Assistant

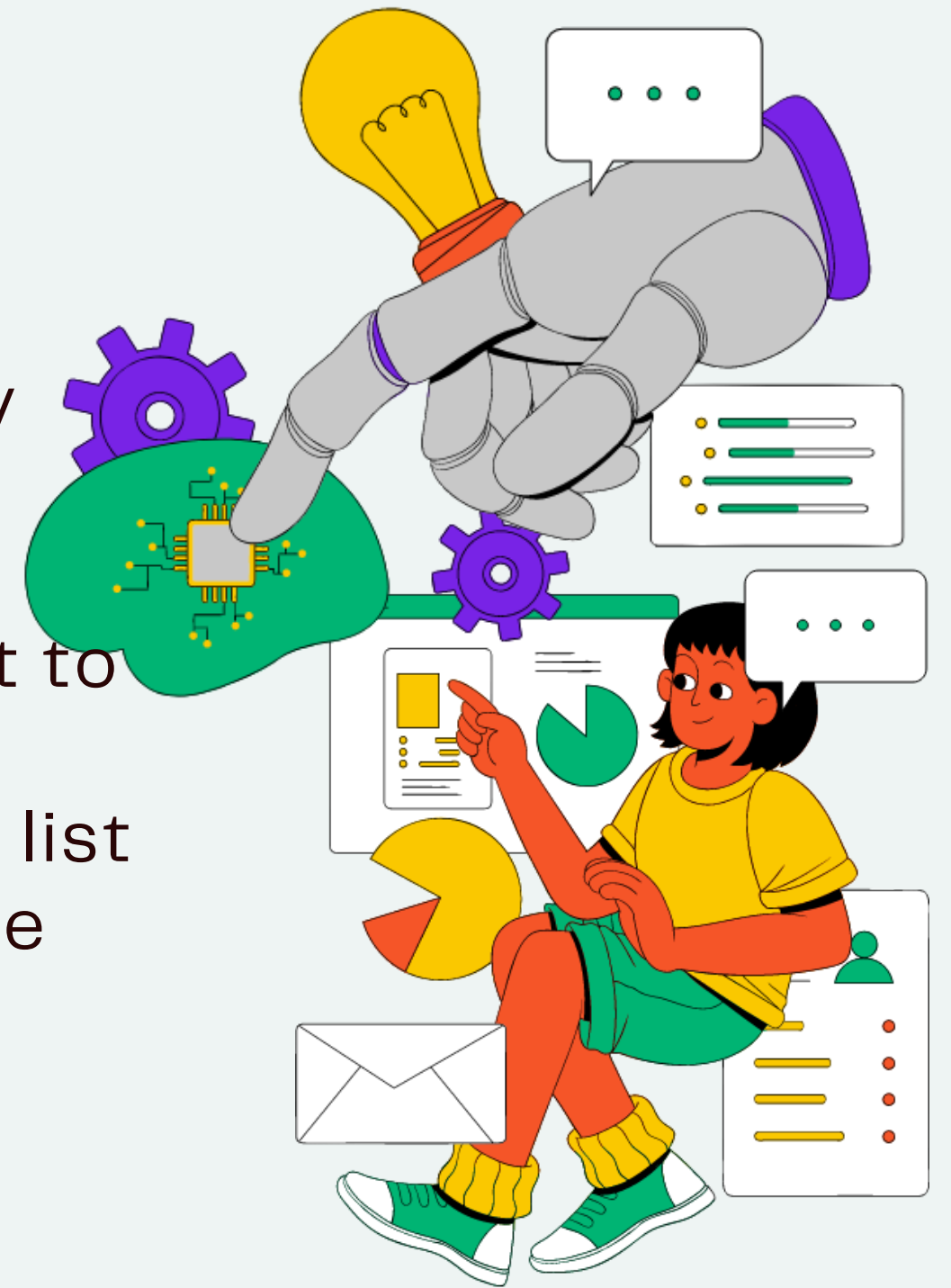**Our solution is a smart web application that automates and enhances the curriculum creation process.**

- **Generate: Instantly create detailed lesson plans, quizzes, or study guides with just a few key inputs.**

- **Refine: Use AI to summarize and expand on specific sections of the curriculum in real time.**

- **Assist: A conversational chatbot provides creative suggestions and helps modify content on the fly.**

- **Save: Securely save and access your generated curricula with a personalized account.**

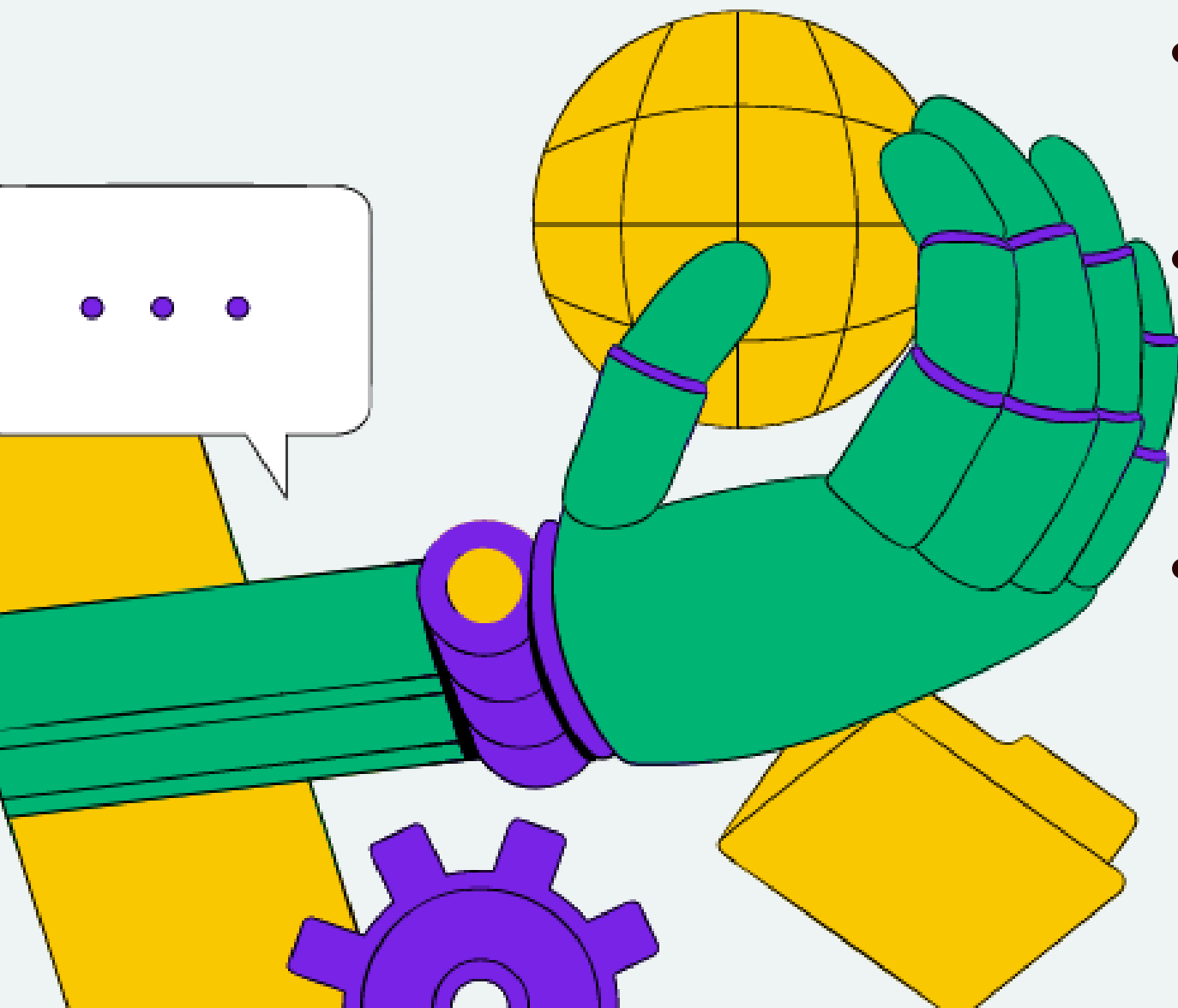# KEY FEATURES (DEMONSTRATION)

Features that Empower the Teacher

- Core Generation: A simple form to generate a curriculum by specifying a topic, grade level, duration, and output format.
- AI-Powered Editing: Select any text and click a button to instantly summarize or expand upon it, tailoring the content to your needs.
- Suggested Resources: With a single click, the AI provides a list of engaging activities and external resources relevant to the generated curriculum.
- Interactive Chatbot: A contextual chatbot that can answer questions about the curriculum or make live edits based on your prompts.
- Persistent Storage: Securely save your work to the cloud, allowing you to access and manage your curricula from anywhere.

HOW IT WORKS

Behind the Scenes: Our Tech Stack
- Frontend: Built with HTML, CSS (Tailwind CSS), and JavaScript for a clean, responsive user interface.
- Backend: A Python Flask server handles all requests and manages the AI integration.
- AI Engine: The Gemini API is the intelligence behind the app, generating all content, summaries, and suggestions.
- Database: Firestore is used for secure, real-time storage of user data, enabling the save/load features.
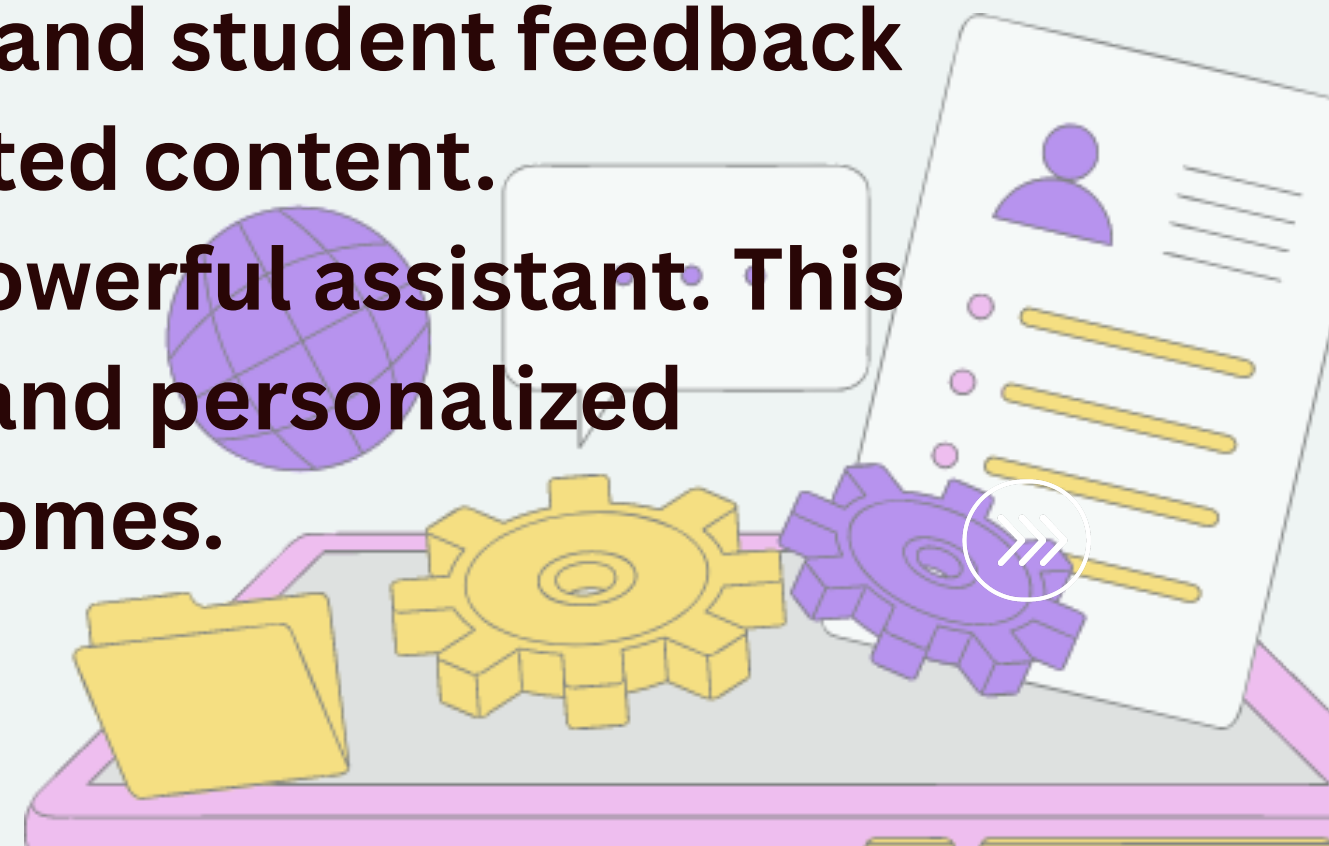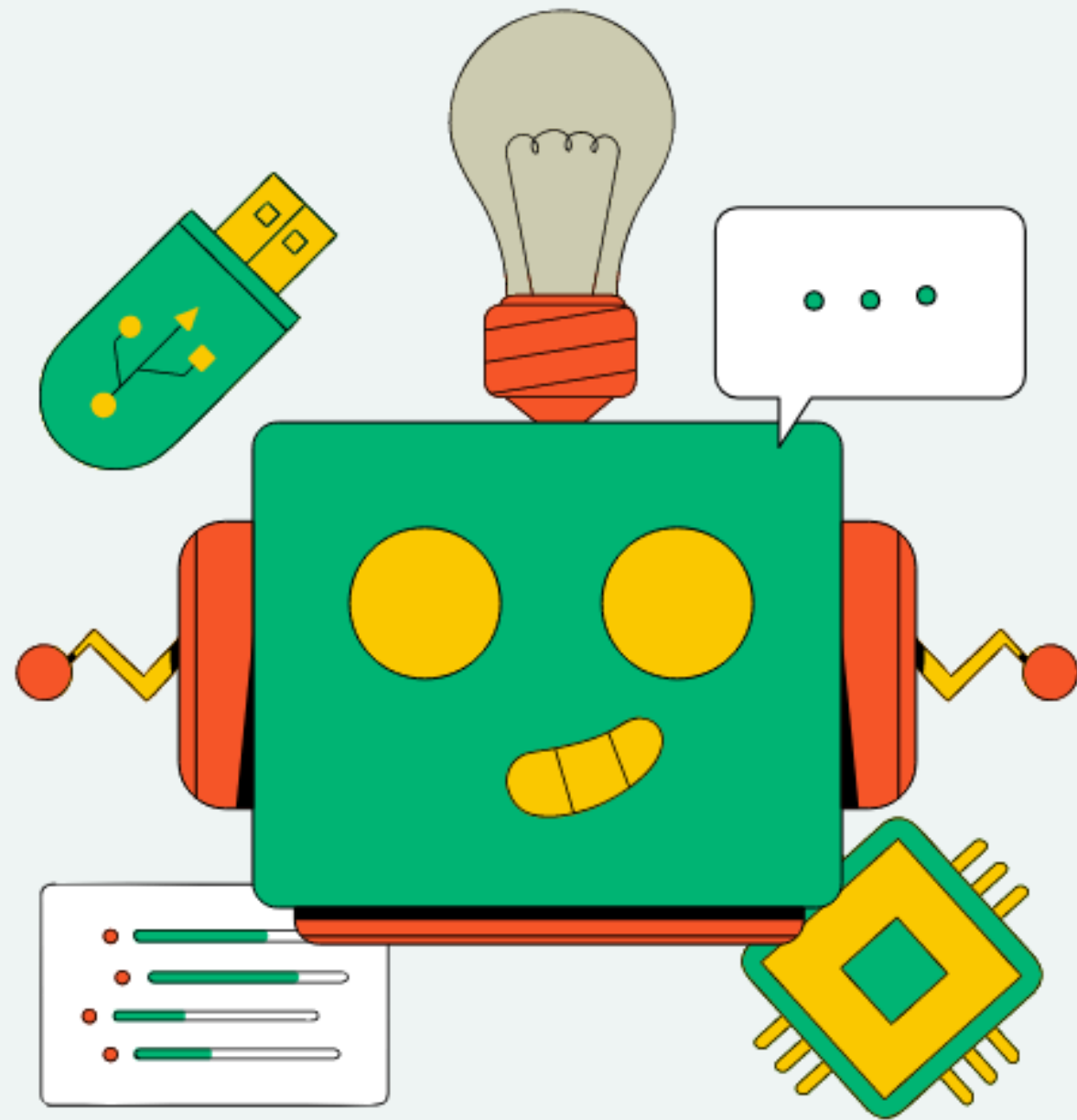
FUTURE SCOPE & IMPACT

Scaling the Impact of AI in Education

- **Multimedia Integration:** Automatically embed images, videos, or interactive elements into generated curricula.
- **Collaborative Features:** Allow teachers to share, edit, and collaborate on lesson plans with their peers.
- **Exporting Options:** Add functionality to export curricula as professional PDFs or other document formats.
- **User Feedback Loop:** A system that learns from teacher and student feedback to continuously improve the quality of generated content.

Impact: We're not replacing teachers; we're giving them a powerful assistant. This tool allows teachers to focus on student engagement and personalized instruction, leading to better learning outcomes.

Thank you

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