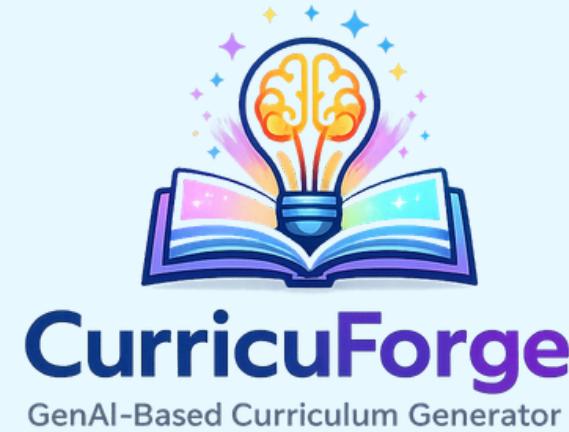


G. Narayananamma Institute of Technology and Science



CURRICUFORGE – GENAI-BASED CURRICULUM GENERATOR

Event: GenAI Forge 2026

AUTOGEN SQUAD TEAM

M .Keerthana-23251A05J0

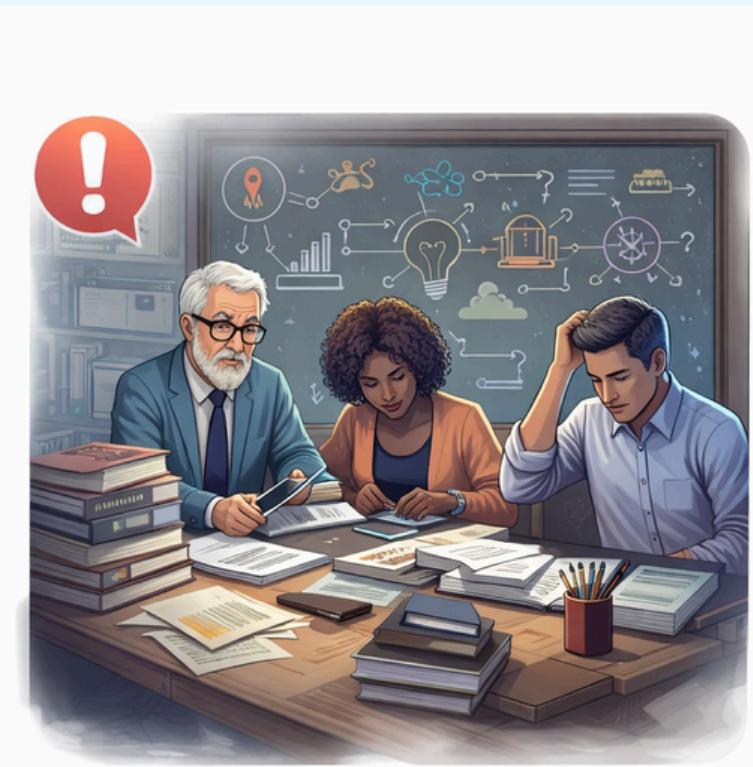
S .Praneetha- 23251A05K2

T .Amitha- 23251A05K4

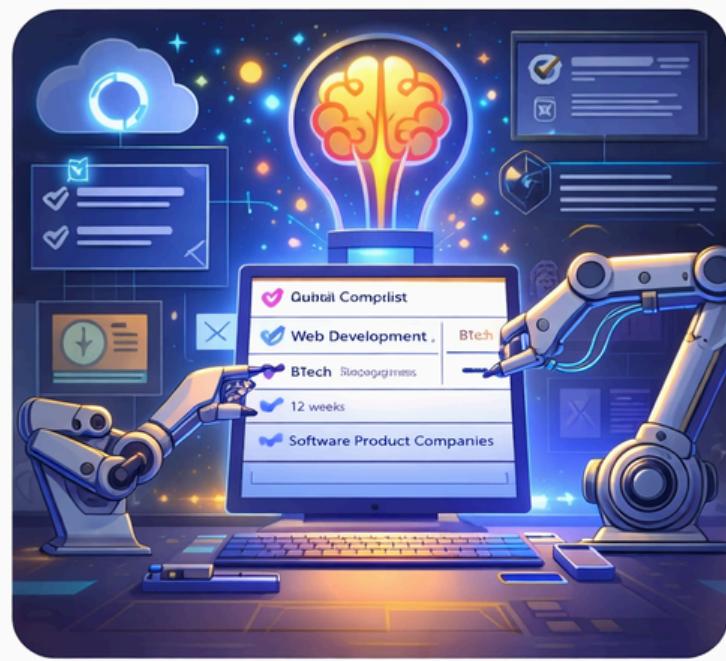
U .Swapna- 23251A05K5

PROBLEM STATEMENT

- Traditional curriculum design is manual, slow, and inconsistent
- Syllabi are often outdated and not aligned with industry needs
- Curriculum planning depends on experts, making it costly and time-consuming
- Students learn outdated content with poor real-world relevance
- Need for an automated, fast, customizable, and industry-aligned curriculum



Traditional curriculum design is slow, manual, and inconsistent. Students face **outdated content** and poor alignment with industry skills.



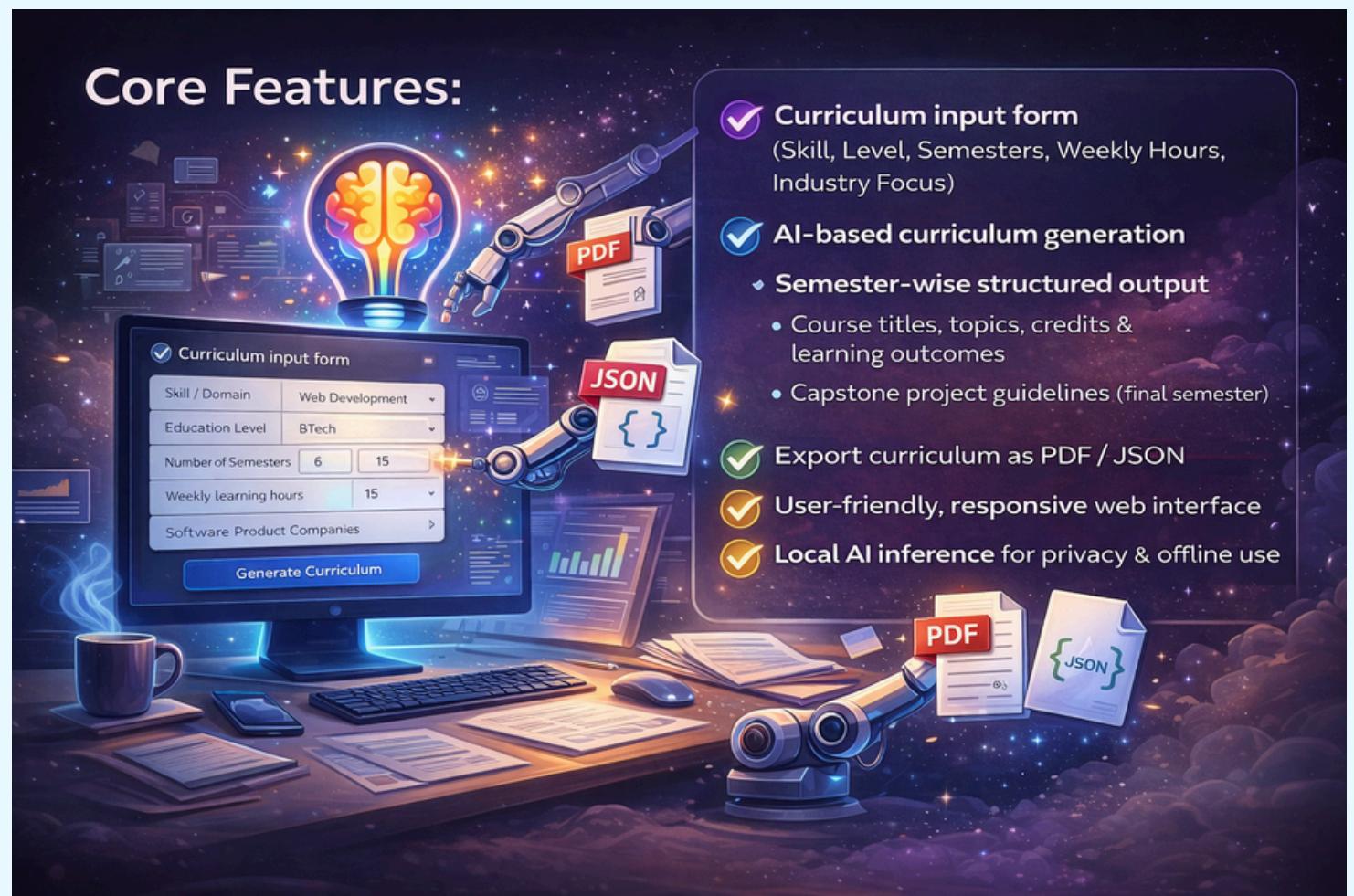
Need for fast, automated, and customizable curriculum **creation** that is **constantly updated** aligned with industry demands.

PROPOSED SOLUTION

- CurricuForge is a web-based application that uses local Generative AI to automatically generate structured and industry-relevant curricula based on user inputs such as skill/domain, education level, number of semesters, weekly learning hours, and industry focus.
- The system generates semester-wise courses, topic lists, learning outcomes, credit distribution, and capstone project guidelines.
- It ensures progressive learning from basic to advanced levels and allows users to export the generated curriculum as a professional PDF document.
- The solution is fast, easy to use, privacy-preserving, and works offline after setup.

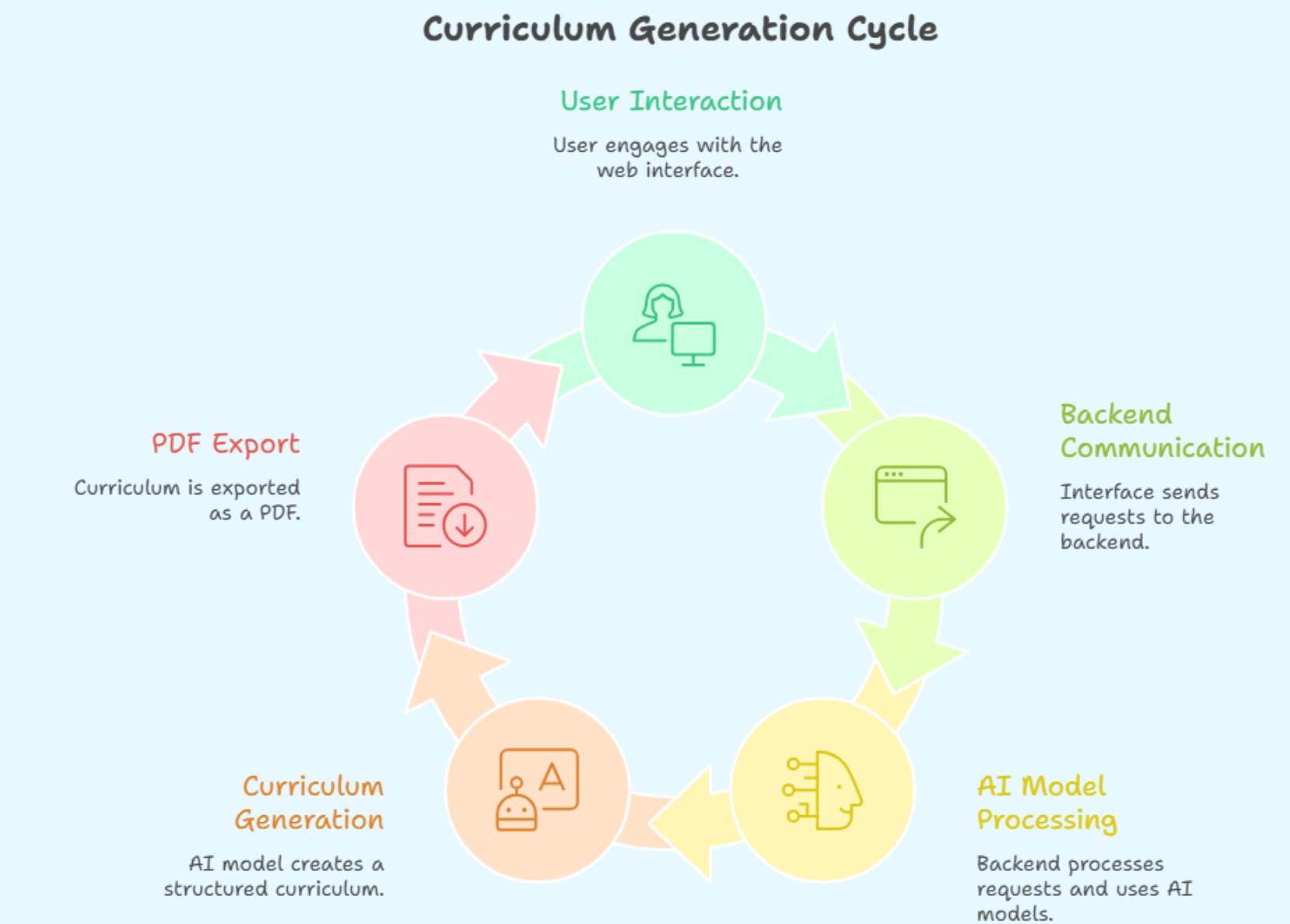
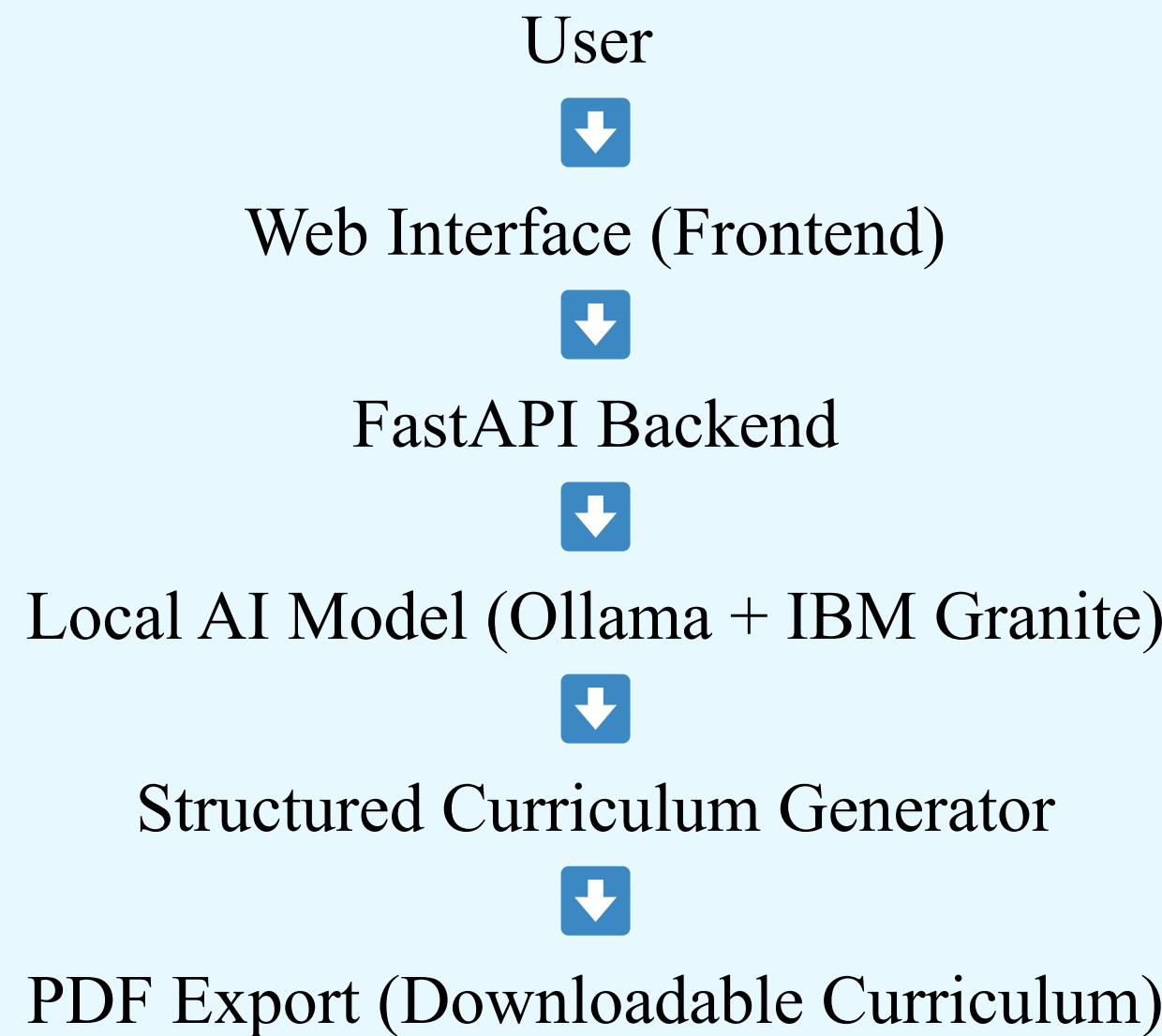
FEATURES

- Curriculum input form (Skill, Level, Semesters, Weekly Hours, Industry Focus)
- AI-based curriculum generation
- Semester-wise structured output
- Course titles, topics, credits & learning outcomes
- Capstone project guidelines (final semester)
- Export curriculum as PDF / JSON
- User-friendly, responsive web interface
- Local AI inference for privacy & offline use



ARCHITECTURE & TECH STACK

SYSTEM ARCHITECTURE



Made with Napkin

ARCHITECTURE & TECH STACK

Technology Stack

Frontend: HTML, CSS, JavaScript

Backend: Python, FastAPI

AI Model: IBM Granite (via Ollama – Local Inference)

PDF Generation: Python PDF Library

Deployment: Localhost / College Server

Why Local AI?

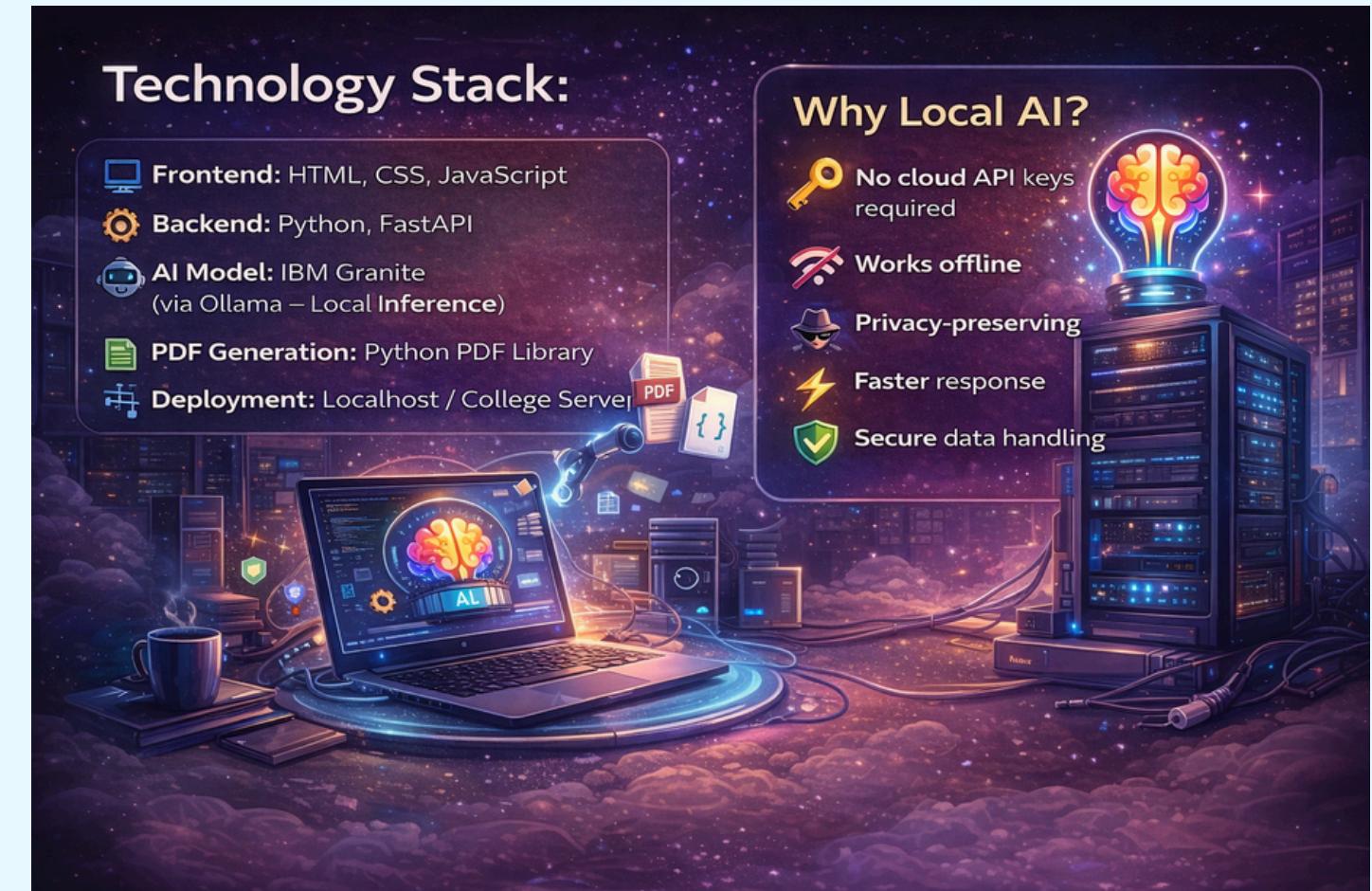
No cloud API keys required

Works offline

Privacy-preserving

Faster response

Secure data handling



IMPACT AND USE CASES

Target Users

- Educational Institutions
- Trainers and Mentors
- Online Course Providers
- EdTech Platforms and Bootcamps

Impact

- Reduces time and effort in curriculum design
- Improves quality and industry relevance of syllabus
- Makes curriculum creation accessible to non-experts
- Enables faster updates to learning content

CONCLUSION

CurricuForge streamlines curriculum design using local Generative AI, enabling fast, privacy-preserving, and industry-aligned syllabus creation. It reduces manual effort, ensures structured learning progression, and helps institutions quickly adapt curricula to evolving industry needs.

THANK
YOU