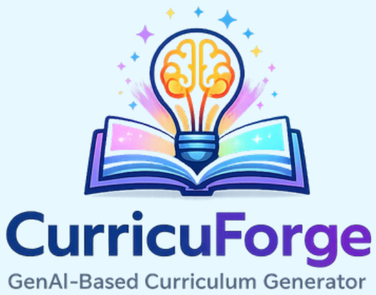
G. Narayanamma Institute of Technology and Science



CURRICUFORGE – GENAI-BASED CURRICULUM GENERATOR

Event: GenAI Forge 2026

AUTOGEN SQUAD TEAM

M .Keerthana-23251A05J0

S .Praneetha- 23251A05K2

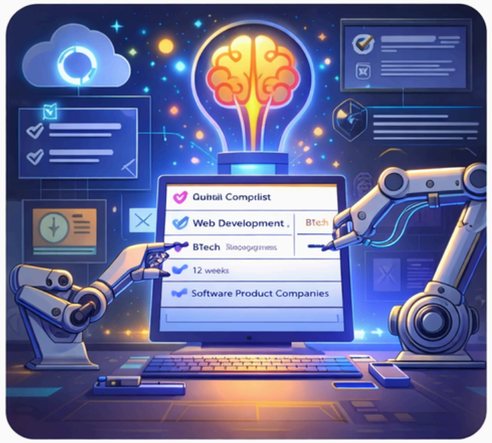
T .Amitha- 23251A05K4

U .Swapna- 23251A05K5

PROBLEM STATEMENT

- Traditional curriculum design is manual, slow, and inconsistent
- Syllabus is often outdated and not aligned with industry needs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- Students learn outdated content with poor real-world relevance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 Students face **outdated content** and poor alignnent with industry skills.



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

PROPOSED SOLUTION

- CurricuForge is a web-based application that uses local Generative AI to automatically create well-structured and industry-relevant curricula. Users can input details like skill or domain, education level, number of semesters, weekly study hours, and industry focus.
- Based on this, the system generates semester-wise courses, topics, learning outcomes, credits, and capstone project guidelines. Unlike traditional systems, it also saves previous curricula so users can access and reuse them anytime without regenerating.
- The system is fast, user-friendly, private, and can work offline after installation.

FEATURES

- Curriculum input form (Skill, Level, Semesters, Weekly Hours, Industry Focus)
- AI-based curriculum generation
- Semester-wise structured output
- Course titles, topics & learning outcomes
- Capstone project guidelines (final semester)
- User-friendly, responsive web interface

ARCHITECTURE & TECH STACK

SYSTEM FLOW:

User

⬇

User Interface

⬇

GenAI Service

⬇

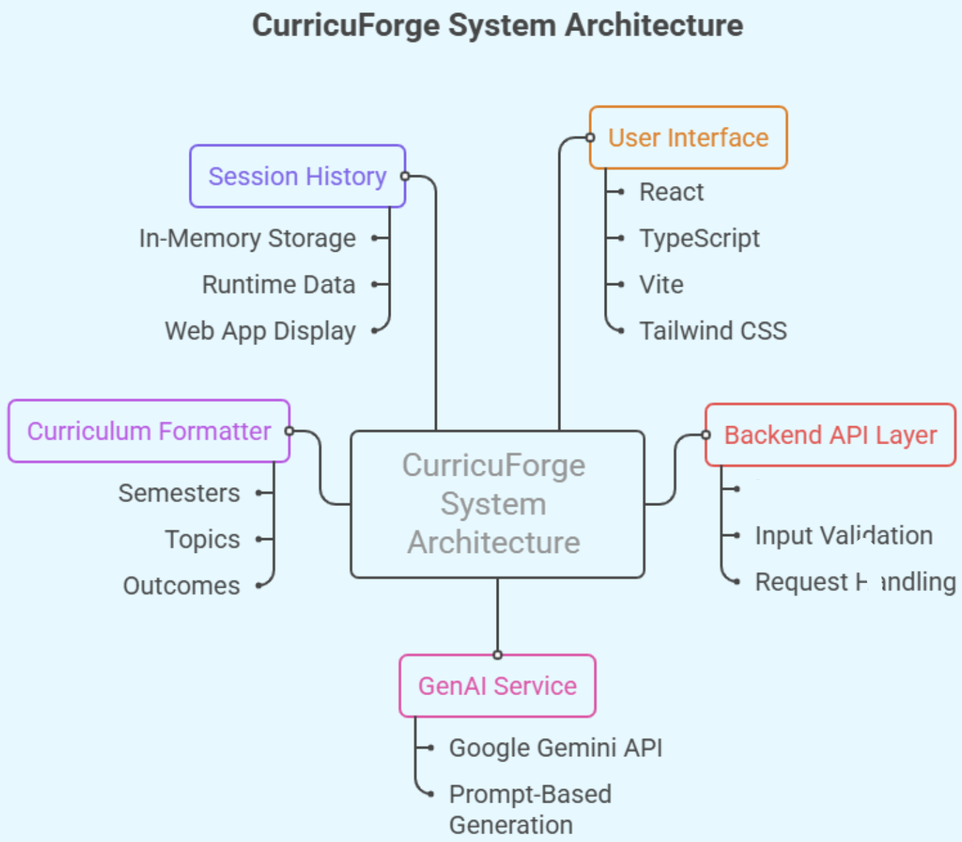
Curriculum Formatter

⬇

Session History

⬇

Display on Dashboard & History Page



TECH STACK

Frontend

- React, TypeScript, Vite, Tailwind CSS

AI Model

- Google Gemini API

Authentication

- Mock Authentication

Storage

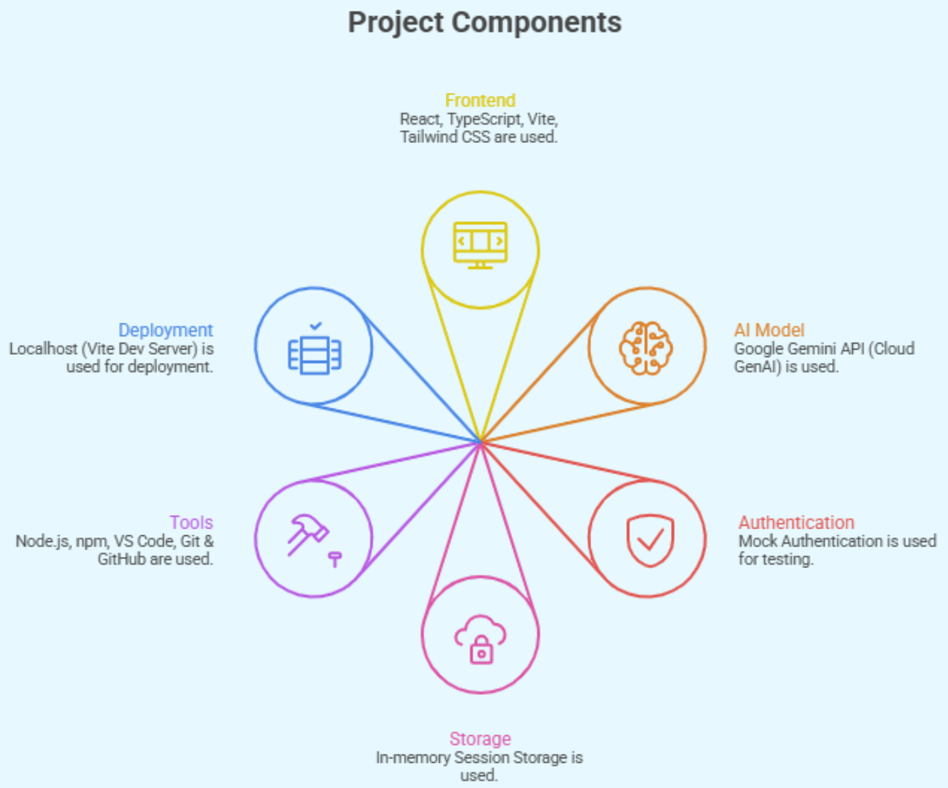
- In-memory Session Storage

Tools

- Node.js, npm, VS Code, Git & GitHub

Deployment

- Localhost



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