Project ID: 7

Project Title
Adaptive Ai Maths Tutor For Personalised Learning

Client Name
Daniel@Gotil.La

Group Capacity
2 groups

Project Background
Mathematics education faces persistent challenges: approximately one in four 15-year-olds in developed countries fails to achieve basic proficiency in mathematics. Many students struggle with math concepts and lack individualised support, resulting in gaps in understanding and confidence. One-on-one tutoring has proven highly effective; for example, an AI-based cognitive tutor doubled students' math learning in one school year compared to regular classes. However, providing each student with a human tutor is impractical due to cost and staffing constraints. An AI-powered maths tutor could help fill this gap by offering adaptive, on-demand support that tailors guidance to individual learners and reduces anxiety and learning loss.

Project Scope
The project involves developing a working prototype (web or mobile) of an AI-powered tutor that assists primary or secondary school students in practising and understanding mathematics.

Project Requirements
The system should:
• Handle example problems spanning basic arithmetic to moderate-level algebra or geometry.
• Provide explanations or contextual hints rather than just final answers to foster learning.
• Adapt problem difficulty or content dynamically based on the student's progress and interaction history.
• Include basic progress tracking for students or teachers (e.g., topics covered, problem accuracy).
Optional features, such as gamification or voice interfaces, may be explored based on the team's interest.

Required Skills

- Basic proficiency in software development (web or mobile)
- Familiarity with AI/ML or NLP tools for adaptive or interactive systems
- Interest in educational technology or human-computer interaction

Expected Outcomes

Functioning system, source code, user guide, report, and presentation

Disciplines

Web Application Development;Mobile Application Development;Artificial Intelligence (Machine/Deep Learning, NLP);Generative AI (GenAI);System/game Development;Human Computer Interaction (HCI);

Other Resources

None