

EduMate AI

Your Personalized Academic Hub

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Introduction to EduMate AI

- EduMate AI is a personalized academic assistant for students.
- Simplifies study management with local AI tools.
- Features include a dashboard, planner, quizzes, summarizer, flashcards, and tracker.
- Built with Streamlit, SQLite, and local LLMs (phi3 via Ollama).

Module 1: Data Collection & Preprocessing

- Load academic content like syllabus, topics, quizzes, and user preferences.
- Clean and structure input from forms or documents.
- Categorize input fields (subject, topic, task, etc.) for AI processing.
- Setup initial database schema (SQLite) and folders for offline use.

Module 2: Feature Engineering & Personalization

- Analyze task patterns, quiz history, and study preferences.
- Identify key indicators: study frequency, topic difficulty, quiz score trends.
- Generate derived features like learning streak, task density, peak hours.
- Adapt dashboard and planner based on individual behavior.

Module 3: Task Data Linking & Roadmap Generation

- Link tasks with defined academic roadmap (subject → topic → task).
- Auto-generate roadmap completion metrics.
- Display personalized syllabus and completion bars on dashboard.
- Update roadmap dynamically based on task status.

Module 4: AI Agent Modules (Quiz, Flashcard, Planner)

- Implement agents as modular Python scripts (e.g., `quiz_agent.py`).
- Integrate LLM (phi3 via Ollama) for summarization, quiz generation, planning.
- Enable local inference to avoid API costs and ensure offline access.
- Allow customization: quiz difficulty, plan time range, flashcard detail.

Module 5: Progress Tracking & Visualization

- Collect task and quiz metrics continuously.
- Display visual stats like task count, quiz trends, streaks.
- Award badges (e.g., 'Week Warrior') based on activity milestones.
- Provide downloadable reports and weekly summaries.

Module 6: Frontend Integration with Streamlit

- Build dashboard and input pages using Streamlit UI.
- Use session state for user authentication and data tracking.
- Ensure mobile compatibility and responsive layout.
- Connect frontend with SQLite and local Python agents.

Module 7: Final Packaging & Deployment

- Package EduMate as an offline desktop/web app.
- Option to sync with Firebase for cross-device cloud support.
- Ensure security and data persistence in local mode.
- Provide installers or zip for final deployment.

Conclusion

- EduMate AI transforms academic planning through intelligent, local tools.
- Ensures privacy, offline access, and personalization.
- Built with modular architecture for easy future expansion.
- Upcoming features include mobile apps, real-time sync, and new AI agents.
- Empowering students to take control of their learning journey.