PROJECT THEMES

Choose **ONE** project theme from the three options below and build a complete end-to-end application.

Project Theme 1: Smart Campus Assistant

Business Context

College students struggle to efficiently study from scattered lecture PDFs, notes, and course materials. They need an intelligent assistant to help them learn faster.

Your Mission: Build and AI assistant that should:

- Allow students to upload course materials (PDFs, documents, PPTs) with drag-and-drop
- Enable natural language Q&A - students ask questions and get accurate answers sourced from their materials
- Automatically summarize long lecture notes and documents
- Generate practice quizzes to test knowledge retention

Suggested Data Sources

- Student's own notes and materials
- Wikipedia API for general knowledge
- NCERT textbooks (publicly available), etc.

Project Theme 2: SmartDine - Food Discovery Assistant

Business Context

Indian college students and young professionals often struggle with food decisions: Where to eat? What's good? What fits my mood and budget?

Your Mission: Build an AI assistant that understands users' cravings and recommends local restaurants with intelligent, conversational insights. The application should:

- Maintain a directory of 15-20 local eateries with details (cuisine, price range, reviews, location)
- Provide a conversational search interface where users can type naturally like "something cheesy but not too expensive" or "comfort food after a rough day"
- Generate smart, contextual recommendations that explain why — "Try Sharma's Dhaba because you wanted cheap and filling, and their thali is legendary"
- Include a "Surprise Me" button for the truly indecisive

Suggested Data Sources

- APIs: Google Places API, Foursquare API (free tiers)
- Manual Data Collection: Create your own dataset
- Public Datasets: Kaggle, OpenStreetMap

Project Theme 3: Career Compass - Job & Career Assistant

Business Context

College students often wonder if they qualify for job openings at companies. They need a tool that analyzes job requirements, evaluates their fit, and provides actionable guidance.

Your Mission: Build an AI career assistant that helps students understand their job readiness and improve their applications. The application should:

- Allow students to paste a job description and upload/paste their resume
- Provide an intelligent match analysis with a visual score or rating (e.g., "Strong Match - 8/10")
- Perform gap analysis: "This role requires 'Docker' and 'AWS' but your resume doesn't mention these - consider adding them if you have experience, or highlight relevant transferable skills"
- Offer one actionable, specific tip to strengthen their application (e.g., "Emphasize your Python project from college - it aligns with their backend requirements")
- Support natural language queries like "What skills should I learn for data science roles?" or "Am I ready for frontend developer positions?"

Useful materials

- **Microsoft's Generative AI for Beginners:** https://learn.microsoft.com/en-us/shows/generative-ai-for-beginners/ (Recommended)

- **DeepLearning.AI Courses** (Andrew Ng): https://www.deeplearning.ai/courses/

- **Fast.ai Practical Deep Learning:** https://course.fast.ai/

- **Google's Machine Learning Crash Course:** https://developers.google.com/machine-learning/crash-course

- **LangChain Documentation:** https://python.langchain.com/docs/get_started/introduction

- **RAG Tutorial by LlamaIndex:** https://docs.llamaindex.ai/en/stable/

Evaluation Criteria

- Working of the application
- Thoughtful use of AI/RAG concepts
- Instructions to setup and execute the application

NOTE: This is a Proof-Of-Concept project aimed at analyzing your ability to learn and build an application. DO NOT include the name "Deltaforge" in the project as it can later be added as a project to your portfolio.

Deliverables

Your submission must include:

1. A public GitHub / GitLab repository URL.

2. A 10-15 minute demo video of your application. The file size should not exceed 1GB.