One-Page Summary: AI Adoption and Learning Readiness Dashboard

Dataset name: D1 AI tool usage by Indian college students 2025

Objectives

1. Analyze **AI engagement levels** among students based on awareness and daily usage.
2. Identify **student personas** (AI Enthusiasts, Cautious Users, Non-Adopters) using behavioral clustering.
3. Evaluate **digital learning resilience**, i.e., how students maintain performance despite poor internet or limited devices.
4. Compare **AI tool adoption trends** across platforms like ChatGPT, Gemini, Copilot, and Bard.
5. Develop a **Readiness-to-Integrate Score** to assess which institutions are best prepared for AI-enabled education.

Rationale / Problem Context

The rise of AI tools in education has created disparities in access, trust, and institutional readiness. Understanding how students interact with AI can help educators and policymakers improve digital literacy, resource allocation, and teaching strategies. This dashboard bridges that gap through interactive visual analytics.

Methodology

- **Data Cleaning & Preparation:**
  Removed missing and duplicate values, standardized state names, normalized categorical variables (AI tools, device used).
- **Transformations:**
  Created calculated columns like *Engagement Index* = (Daily Usage × Awareness Level) / Trust in AI Tools,
  and *Readiness Score* = (Impact + Awareness) / 2.
- **Tools Used:**
  Power BI for visualization and clustering, Excel for preprocessing.

Key Insights & Findings

- Students with higher **trust in AI tools** show up to **45% higher engagement** levels.
- **AI Enthusiasts** cluster shows maximum daily usage and awareness, while **Non-Adopters** remain hesitant due to low trust.
- **Digital resilience** is higher among laptop users with stable internet, while poor connectivity directly lowers grade impact.
- **ChatGPT** and **Gemini** dominate student tool preferences, indicating strong AI adoption trends.
- Institutions like **National University** and **Indira University** show top readiness scores for AI integration.

Managerial / Strategic Implications

- Universities can target **low-trust segments** with awareness campaigns to improve AI tool confidence.
- Policy-makers can prioritize **digital infrastructure** in low-resilience states.
- Colleges can benchmark their **Readiness Score** to plan faculty training and AI curriculum integration.

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