📊 AI Startups Analytics Dashboard

End-to-End Power BI Business Intelligence Project

🚀 1. Project Overview

The **AI Startups Analytics Dashboard** is an end-to-end Business Intelligence project built using **Power BI** to analyze the growth, funding patterns, product innovation, and market engagement trends in the AI startup ecosystem.

This project transforms raw multi-source datasets into actionable insights for:

- Investors
- Startup founders
- Business analysts
- Market researchers
- Strategic decision-makers

The dashboard integrates startup data, funding rounds, product launches, and engagement metrics into a single interactive analytics solution.

🎯 2. Business Problem Statement

The AI startup ecosystem is rapidly growing, with increasing investments and innovation across industries. However, stakeholders often struggle to:

- Identify high-growth AI sectors
- Understand funding distribution patterns
- Measure startup innovation performance
- Analyze real market engagement beyond capital investment
- Compare regional and industry-based trends

This dashboard solves these challenges by providing a centralized, interactive analytical view of the AI startup landscape.

📂 3. Dataset Description

The project integrates multiple structured datasets:

AI_Startups_Realistic.csv

Contains startup-level details such as:

- Startup Name
- Industry / AI Domain
- Location
- Founding Year
- Valuation

Funding_Rounds.csv

Contains:

- Funding Stage (Seed, Series A, B, etc.)
- Investment Amount
- Date of Funding
- Investor Type

Products_Projects_Realistic.csv

Includes:

- Product Name
- AI Technology Used
- Launch Year
- Associated Startup

Market_Engagements.csv

Includes:

- Customer Growth
- Engagement Score
- Market Penetration Metrics

These datasets were integrated using relational modelling in Power BI.

🏗️ 4. Data Preparation & Modeling Process

Step 1: Data Cleaning

- Removed null values
- Standardized funding stages
- Formatted date columns
- Removed duplicates
- Verified data consistency

Step 2: Data Transformation

- Created calculated columns
- Derived KPIs
- Standardized categorical fields

Step 3: Data Modeling

- Established relationships between startup ID across tables
- Built a star-schema-like structure
- Defined fact and dimension tables
- Ensured correct cardinality (1-to-many relationships)

📐 5. Key DAX Measures Created

Some important calculated measures include:

📌 Total Funding

```
Total Funding = SUM(Funding_Rounds[Amount])
```

📌 Total Startups

```
Total Startups = DISTINCTCOUNT(AI_Startups[Startup_ID])
```

📌 Average Funding per Startup

```
Avg Funding = DIVIDE([Total Funding], [Total Startups])
```

📌 Total Products

```
Total Products = COUNT(Products[Product_ID])
```

📌 Average Engagement Score

```
Avg Engagement = AVERAGE(Market_Engagements[Engagement_Score])
```

📊 6. Dashboard Pages & Visual Explanation

🟢 1. Executive Overview Page

Purpose: Provide high-level summary for decision-makers.

Visuals:

- KPI Cards (Total Startups, Total Funding, Avg Funding)
- Industry Distribution (Bar/Donut Chart)
- Startup Growth Over Time (Line Chart)
- Geographic Distribution

Business Insight:
Gives instant understanding of ecosystem scale and growth.

🟢 2. Funding Analysis Page

Purpose: Analyze capital flow patterns.

Visuals:

- Funding by Stage
- Funding Trend Over Time
- Top Funded Startups
- Region-wise Funding Distribution
- Investor Participation

Business Insight:
Helps investors identify:

- Which stages attract most funding
- High-performing startups

- Emerging funding trends

🟢 3. Product & Innovation Analysis

Purpose: Evaluate innovation intensity.

Visuals:

- Products Launched by Industry
- AI Technology Distribution
- Product Growth Trend
- Startup-wise Product Count

Business Insight:
Measures innovation scalability and technology adoption trends.

🟢 4. Market Engagement Analysis

Purpose: Measure real-world impact beyond funding.

Visuals:

- Engagement Score Trends
- Customer Growth Trends
- Industry-wise Market Penetration
- Performance Benchmarking

Business Insight:
Identifies startups with strong product-market fit.

📈 7. Key Insights Derived

- Funding has significantly increased in recent years.
- NLP and Computer Vision sectors show strong investor interest.
- Certain regions dominate AI startup funding.
- High funding does not always correlate with high engagement.
- Product diversification positively impacts engagement metrics.