**Advanced Visualization and Storytelling**

**Assignment 1**

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**Question 1**

This dashboard shows data about **house demolitions** in different districts. It helps us understand how many houses were destroyed, how many people became homeless, and which areas were affected the most. The dashboard includes:

* **Trends over the years** – showing if demolitions increased or decreased.
* **District-wise breakdown** – showing which areas had the most demolitions.
* **People left homeless** – including total people and minors.
* **Type of structures demolished** – whether they were homes or other buildings.
* **Different charts** like bar charts, pie charts, and line graphs make it easy to see the data.

1. **Which year had the highest number of people left homeless?**

The **pie chart** in the dashboard shows that **2016** had the highest number of people left homeless. The slice for 2016 is the biggest, meaning more people lost their homes that year.

1. **Which district has the highest number of demolitions?**

According to the dashboard, **Hebron** has the highest number of demolitions. This is shown in the **bar chart** under "Count of Number\_of\_Demolitions by District" where Hebron has the longest bar.

**Question 2**

This animation **visually builds a preferential attachment graph** using the **Barabási-Albert model**, which simulates how real-world networks grow (like social media or the internet).

* The graph starts with a few **initial nodes** and grows as **new nodes** are added, preferring to connect with well-connected nodes (hubs).
* **Nodes appear one by one** with a soft glow effect, showing how the network grows.
* **Edges are drawn dynamically**, linking new nodes to existing ones based on preferential attachment.
* The **color of each node changes based on its degree (connections)**, transitioning from **blue to pink**, where more connected (hub) nodes are more pink.
* **Bigger nodes represent hubs**, making it clear which nodes are the most influential in the network.
* At the end, the script plots the **degree distribution**, showing a **power-law relationship** (common in scale-free networks).

**Dashboard and Animation**

<https://drive.google.com/drive/folders/15BIQ3QuZ23gxxIiLBY9SnmRUJKANT5KD?usp=sharing>