

Aravind Kagganti Anjinamurthy
Final Project 2025

Analysis of Global Terrorism Trends (1970– 2017)

Insights from the Global Terrorism Database
(GTD)

Github link: https://github.com/Aravind235/final_project_winter2025

Streamlit link: <https://finalprojectwinter2025.streamlit.app/>



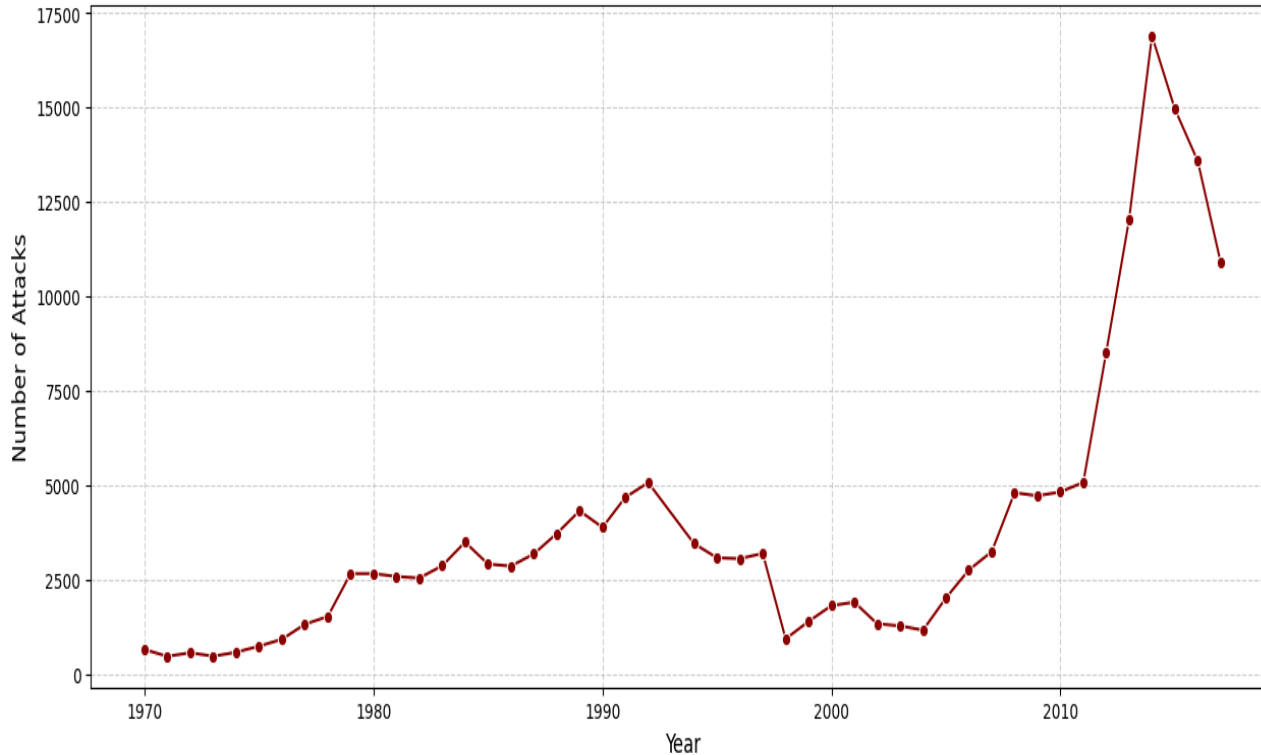
OBJECTIVE & DATASET

- **Objective:** To analyze historical terrorism data to uncover patterns in frequency, geographic distribution, and operational tactics over the last 50 years.
- Dataset Source: Global Terrorism Database (GTD) via Kaggle/START UMD.
- Dataset Scope:
 - Period: 1970 to 2017.
 - Volume: ~180,000+ recorded incidents.
 - Key Variables: Dates, Locations (Lat/Lon), Attack Types, Weapons, Casualties, and Group Names.

THE "WHEN" – GLOBAL TRENDS OVER TIME

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Global Terrorism Trends (1970 - 2017)



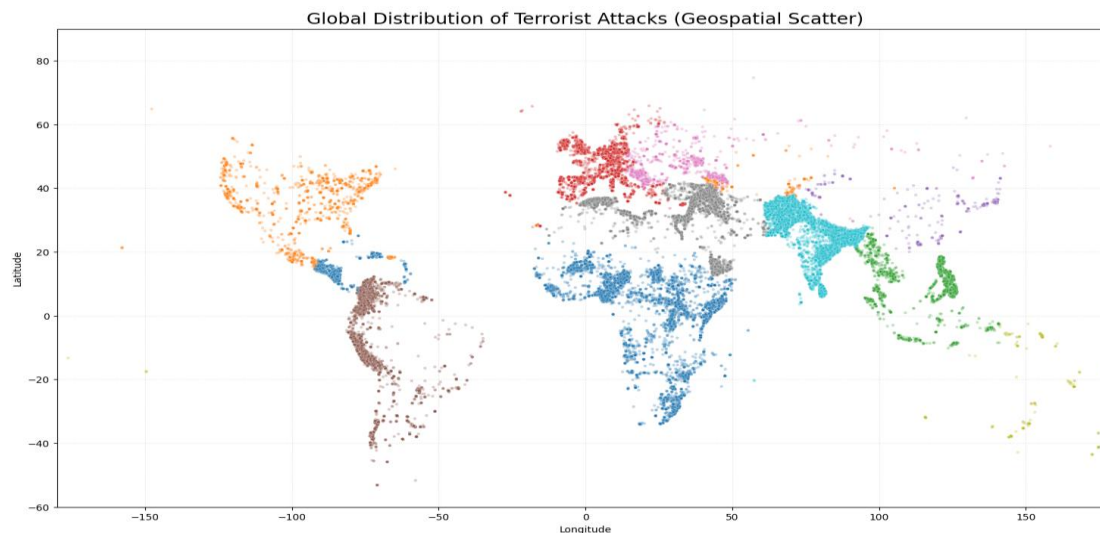
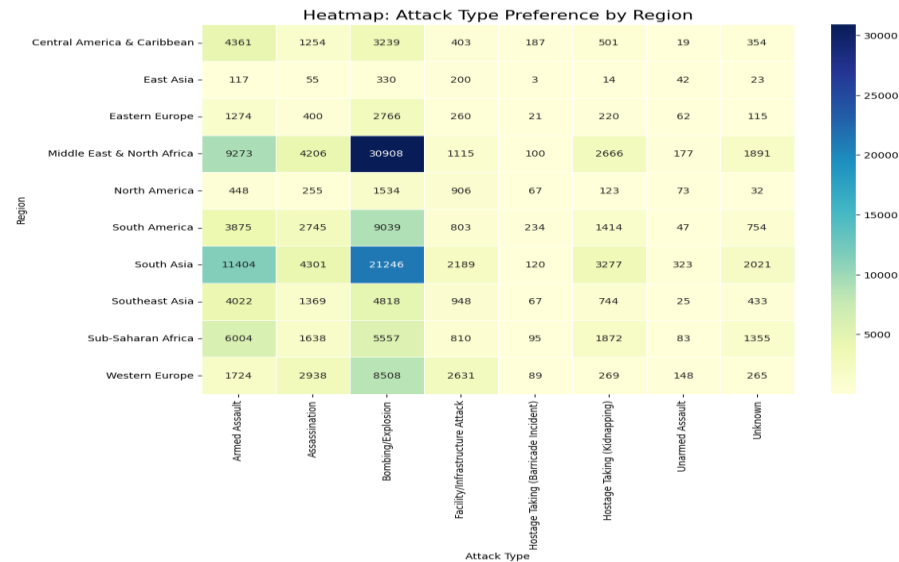
Key Insights:

- Terrorism was relatively stable from 1970 to 2000.
- **Major Finding:** A sharp, exponential rise in attacks began around 2010–2012.
- **Context:** This surge correlates with regional destabilization in the Middle East (Arab Spring, rise of ISIS) and conflicts in South Asia.



THE "WHERE" – GEOSPATIAL HOTSPOTS

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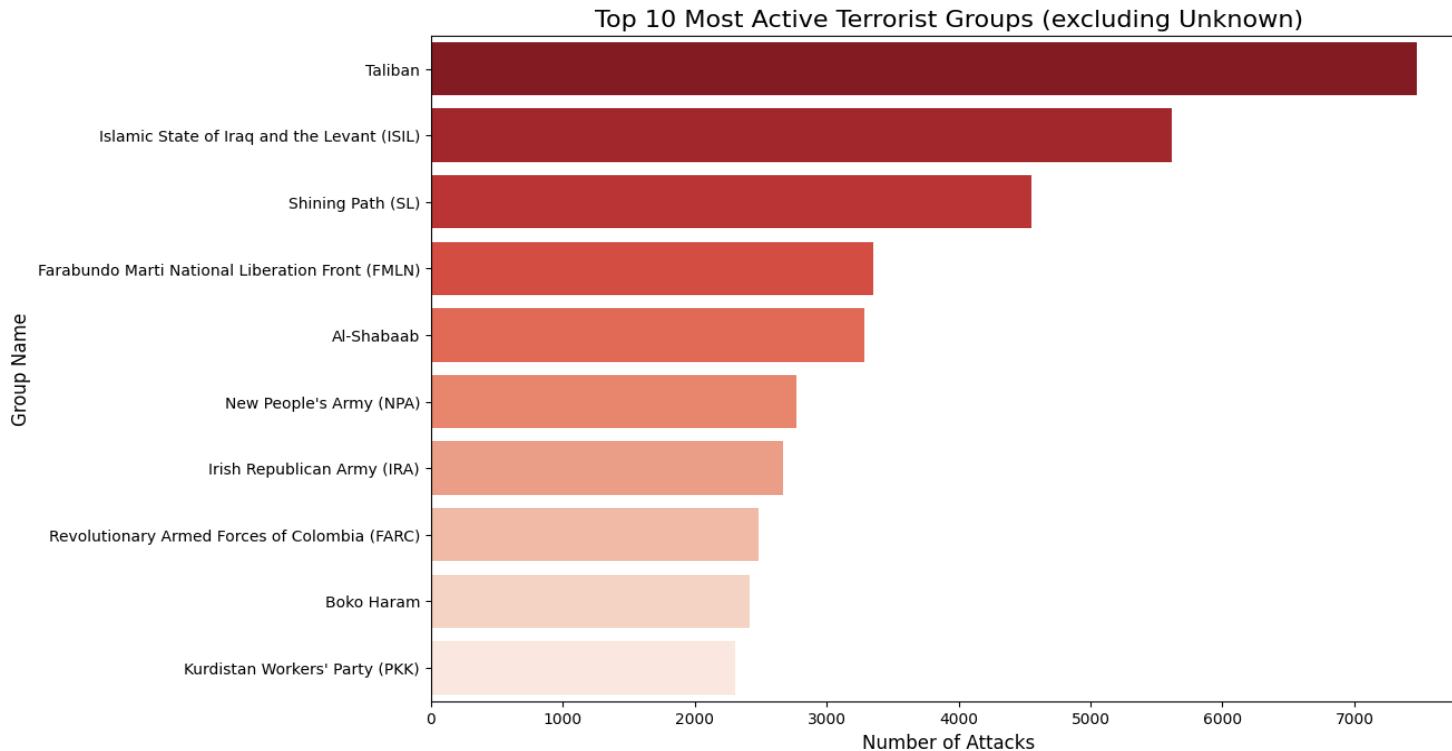


Key Insights:

- Terrorism is not evenly distributed; it is highly concentrated in specific "hotspots."
- **Dominant Regions:** Middle East & North Africa (MENA) and South Asia account for the majority of incidents.
- **Contrast:** North America and Western Europe see comparatively lower frequency, despite high media attention.

THE "WHO" – MAJOR PERPETRATORS

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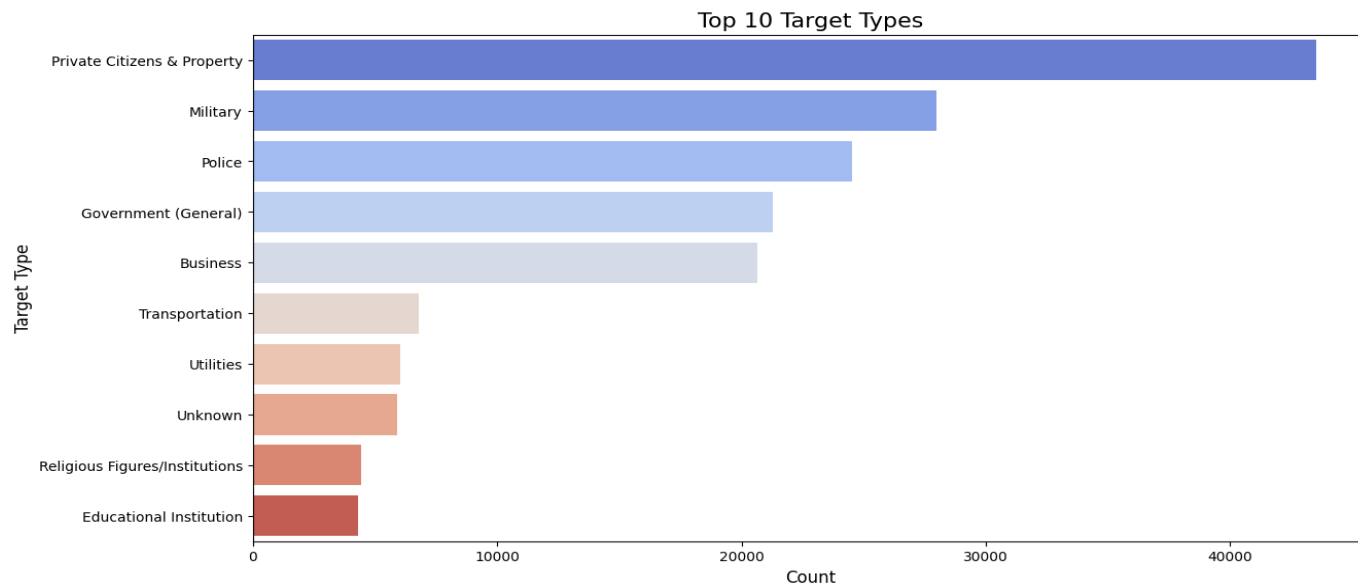
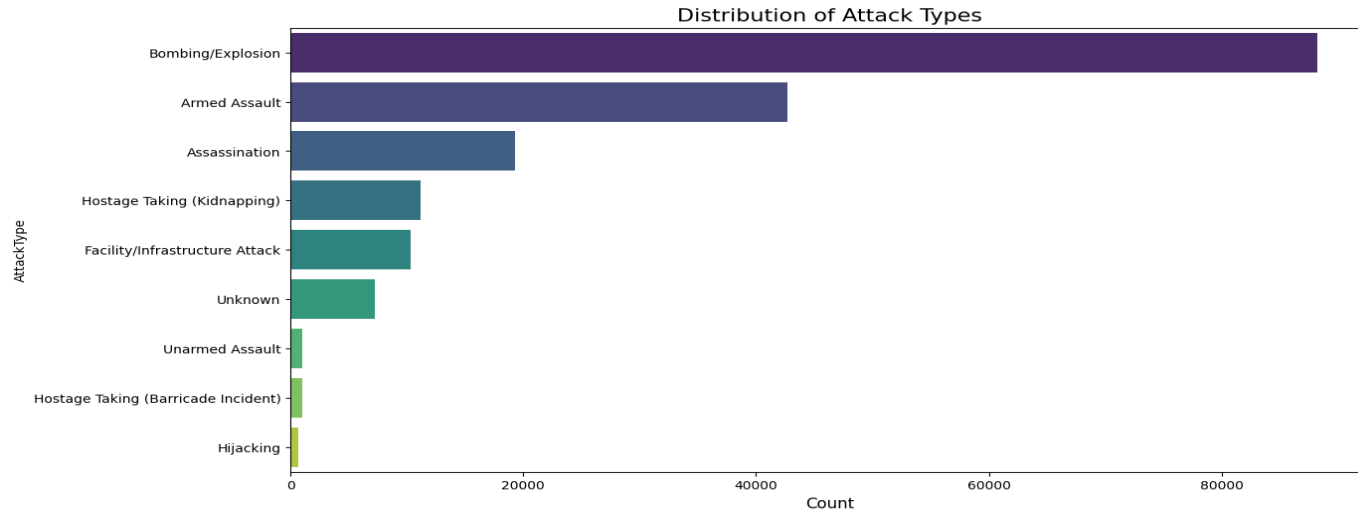
Key Insights:

- **Top Groups:** When excluding "Unknown" actors, the **Taliban** and **ISIL (Islamic State)** are the most active groups historically.
- **Historical Shift:** The data reflects a transition from political/revolutionary groups (e.g., Shining Path in the 80s) to religious extremist groups in the modern era.



THE "HOW" – TACTICS & TARGETS

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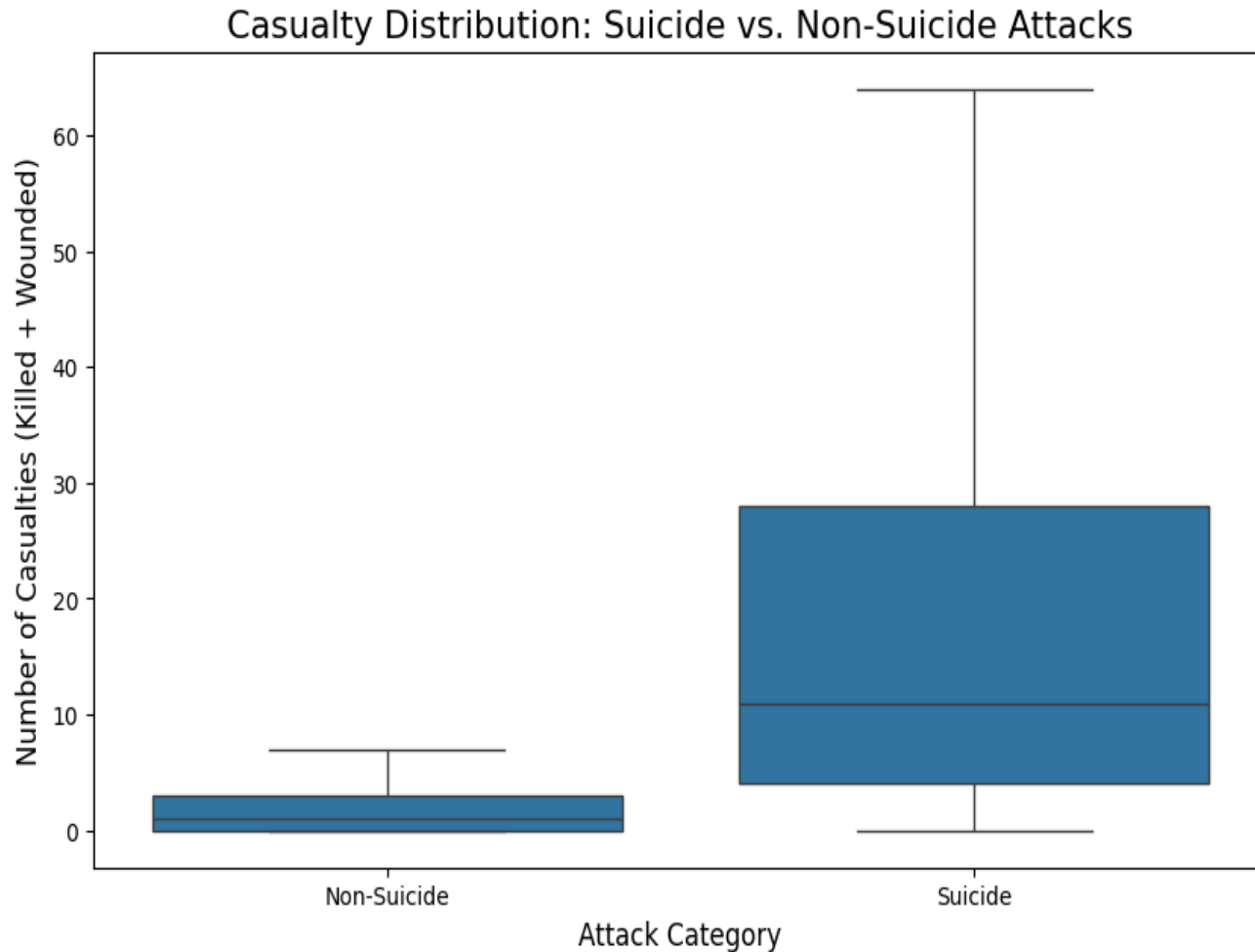
Key Insights:

- **Preferred Method:** "Bombing/Explosion" is the most common tactic (likely due to IED usage).
- **Primary Targets:** Private Citizens & Property are the #1 target, consistently higher than Military or Government targets.
- **Conclusion:** Modern terrorism disproportionately affects soft targets (civilians).



IMPACT ANALYSIS – LETHALITY

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Key Insights:

- **Lethality Driver:** Suicide attacks are statistically more lethal than non-suicide attacks.
- **Data:** The median casualty count for suicide missions is significantly higher.
- **Implication:** Suicide tactics allow attackers to infiltrate denser crowds, maximizing the "success" of their casualty goals.

INTERACTIVE STREAMLIT DASHBOARD

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Deploy ⋮



Global Terrorism Database Analysis

An interactive dashboard exploring terrorist attacks from 1970 to 2017.

Total Attacks

181,691

Total Casualties

935,737

Most Active Group

Taliban

Most Targeted Country

Iraq

Filter Options

Select Year Range



Select Region

Central Am... x

North Ame... x

Southeast ... x

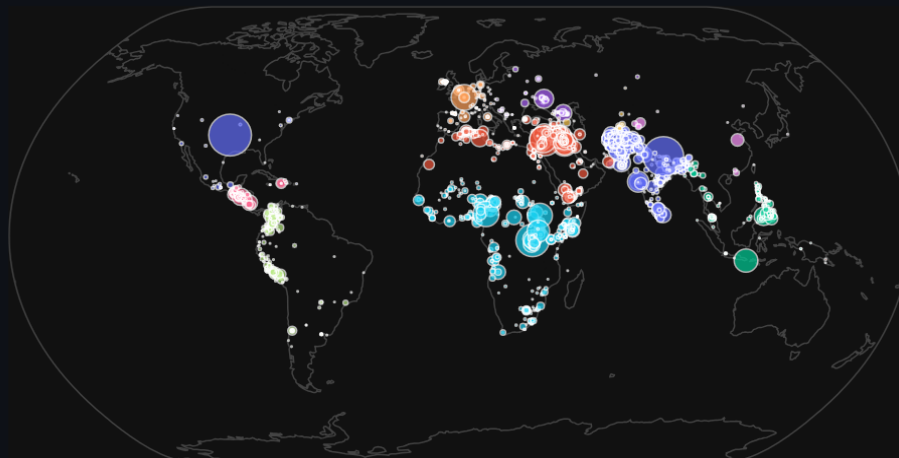
Western Eu... x

...



Geospatial Distribution

⚠ Displaying a random sample of 5,000 attacks to maintain performance.



Region

- South Asia
- Middle East & North Africa
- Southeast Asia
- Eastern Europe
- Western Europe
- Sub-Saharan Africa
- Central America & Caribbean
- South America
- East Asia
- Central Asia
- North America
- Australasia & Oceania



Attacks Over Time



INTERACTIVE STREAMLIT DASHBOARD

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Deploy

Filter Options

Select Year Range

1970 2017

1970 2017

Select Region

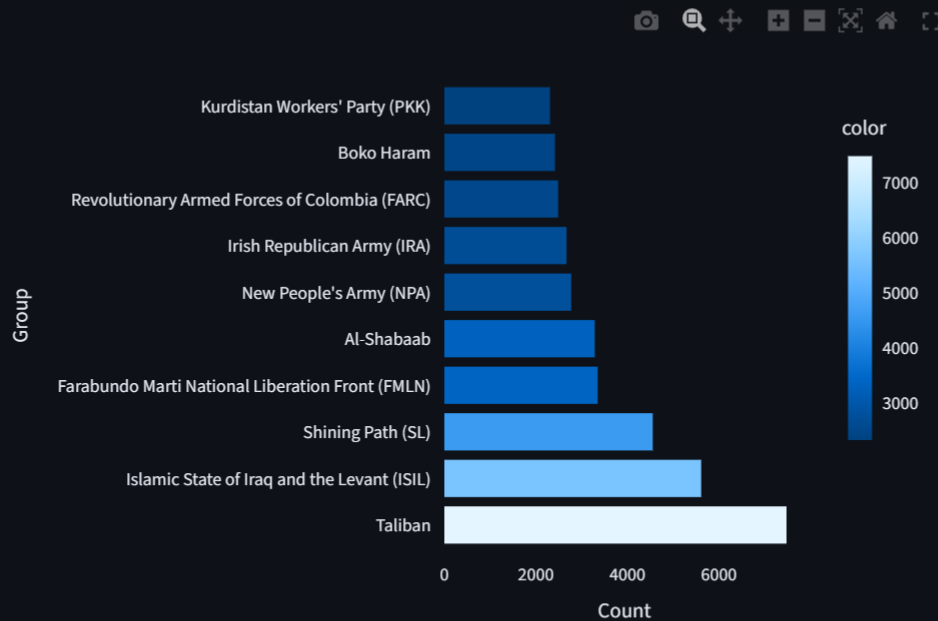
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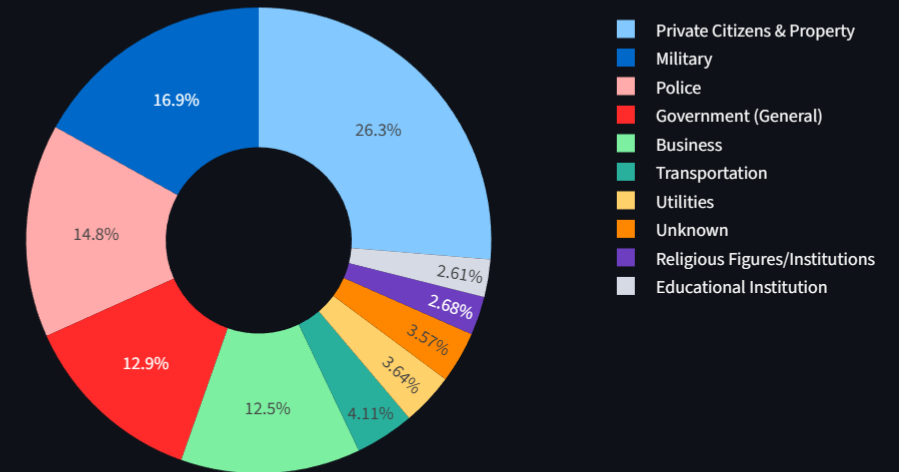
Southeast ... x

Western Eu... x

🔥 Top Attacking Groups



🎯 Attack Targets



Data Source: Global Terrorism Database (GTD) | Final Project Winter 2025 | Aravind Kagganti Anjinamurthy

CONCLUSION

- **Summary:**
 1. **Volume:** Terrorism has increased drastically in the 21st century compared to the 20th.
 2. **Geography:** Violence is highly localized in conflict zones (Iraq, Afghanistan, Pakistan), not global.
 3. **Tactics:** Explosives and attacks on civilians remain the primary *modus operandi*.

Final Thought: Data analysis reveals that while terrorism is a global concern, its most devastating impacts are concentrated in specific regions and eras.



THANK
YOU

