

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.



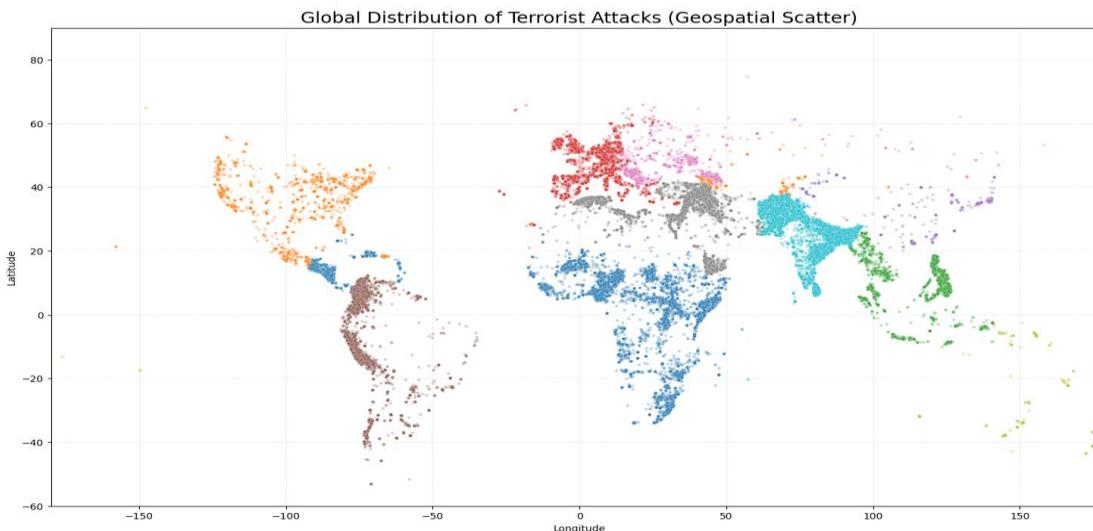
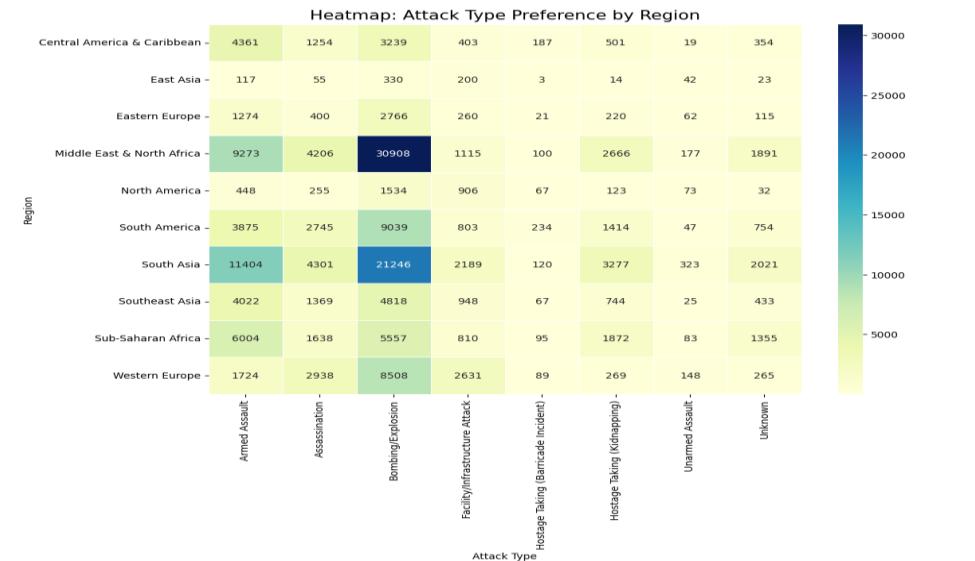
THE "WHEN" – GLOBAL TRENDS OVER TIME



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.

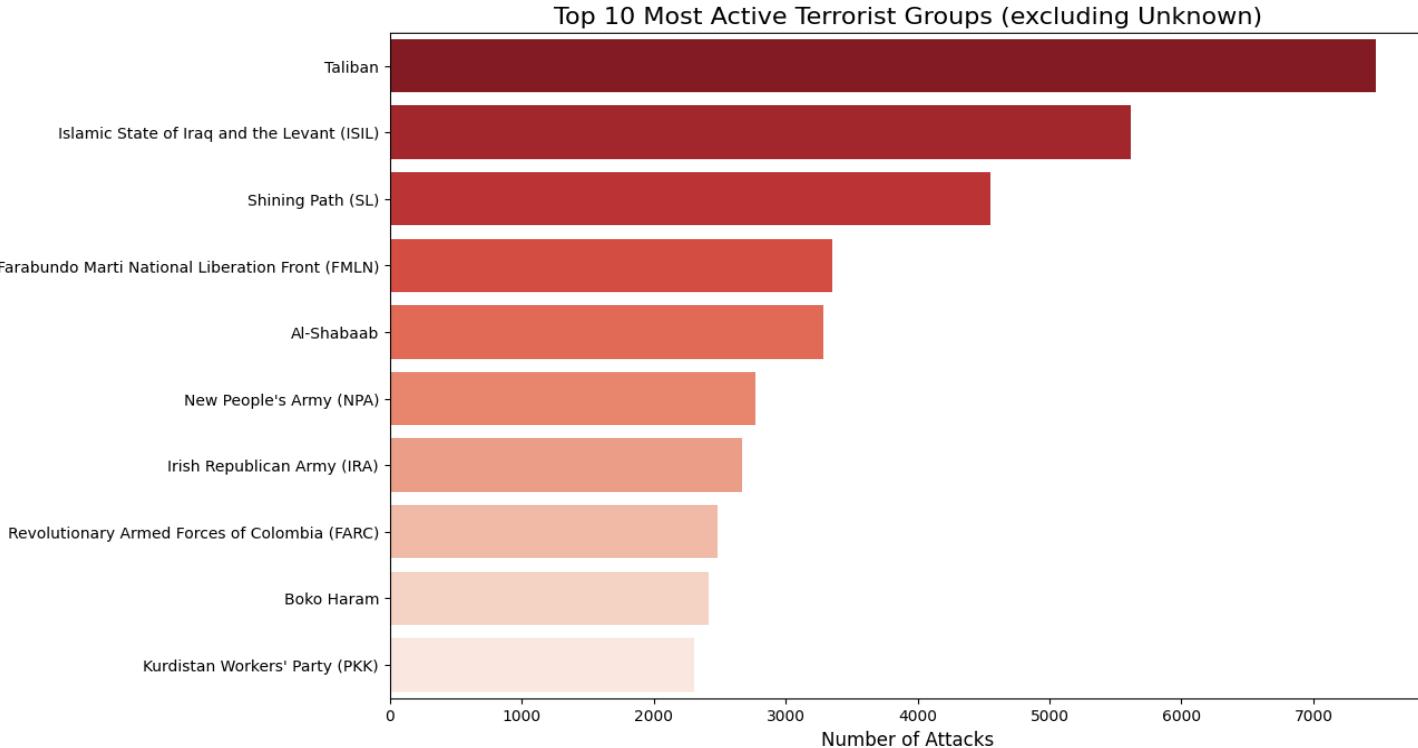
THE "WHERE" – GEOSPATIAL HOTSPOTS



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

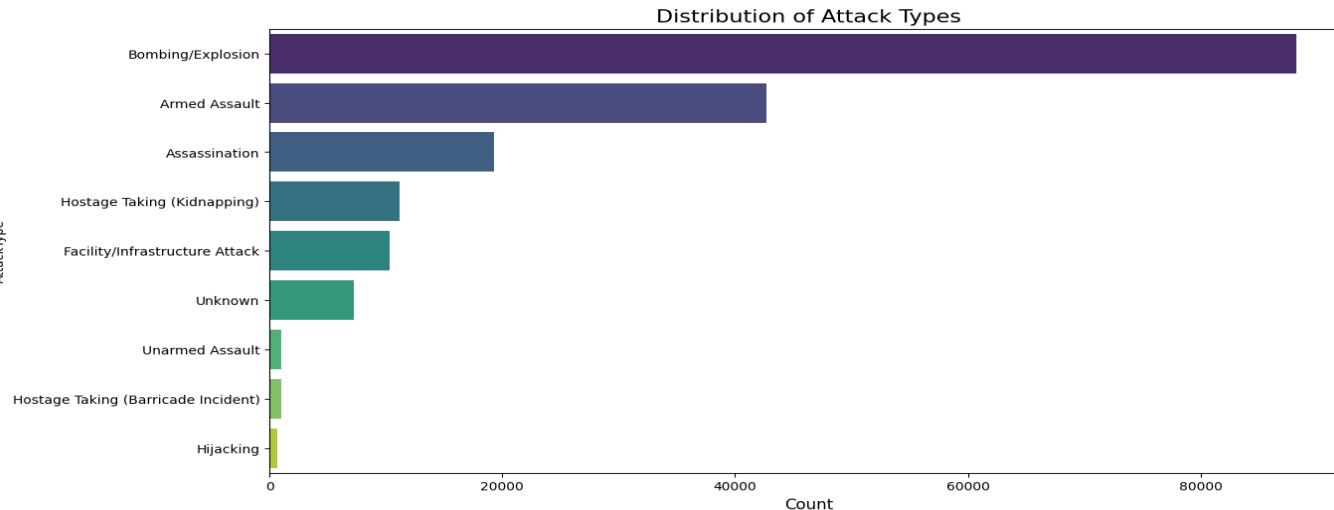


Key Insights:

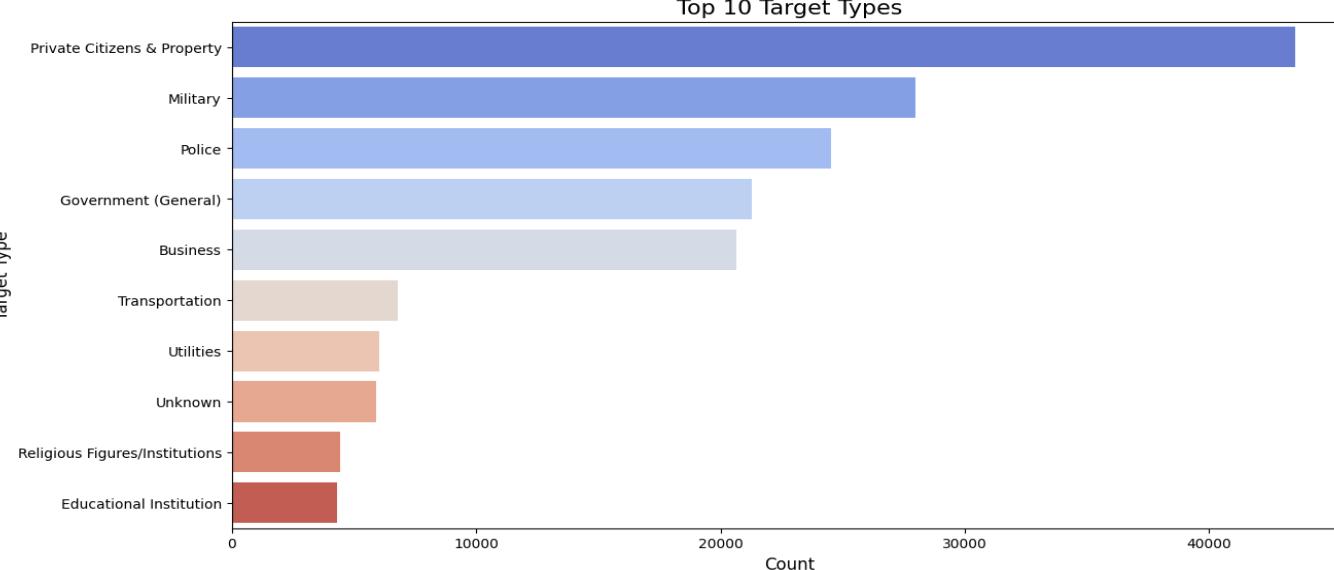
- **Top Groups:** When excluding "Unknown" actors, the **Taliban** and **ISIL (Islamic State)** are the most active groups historically.
- **Historical Shift:** The data reflects a transition from political/revolutionary groups (e.g., Shining Path in the 80s) to religious extremist groups in the modern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

THE "HOW" – TACTICS & TARGETS

AttackType



Target Type

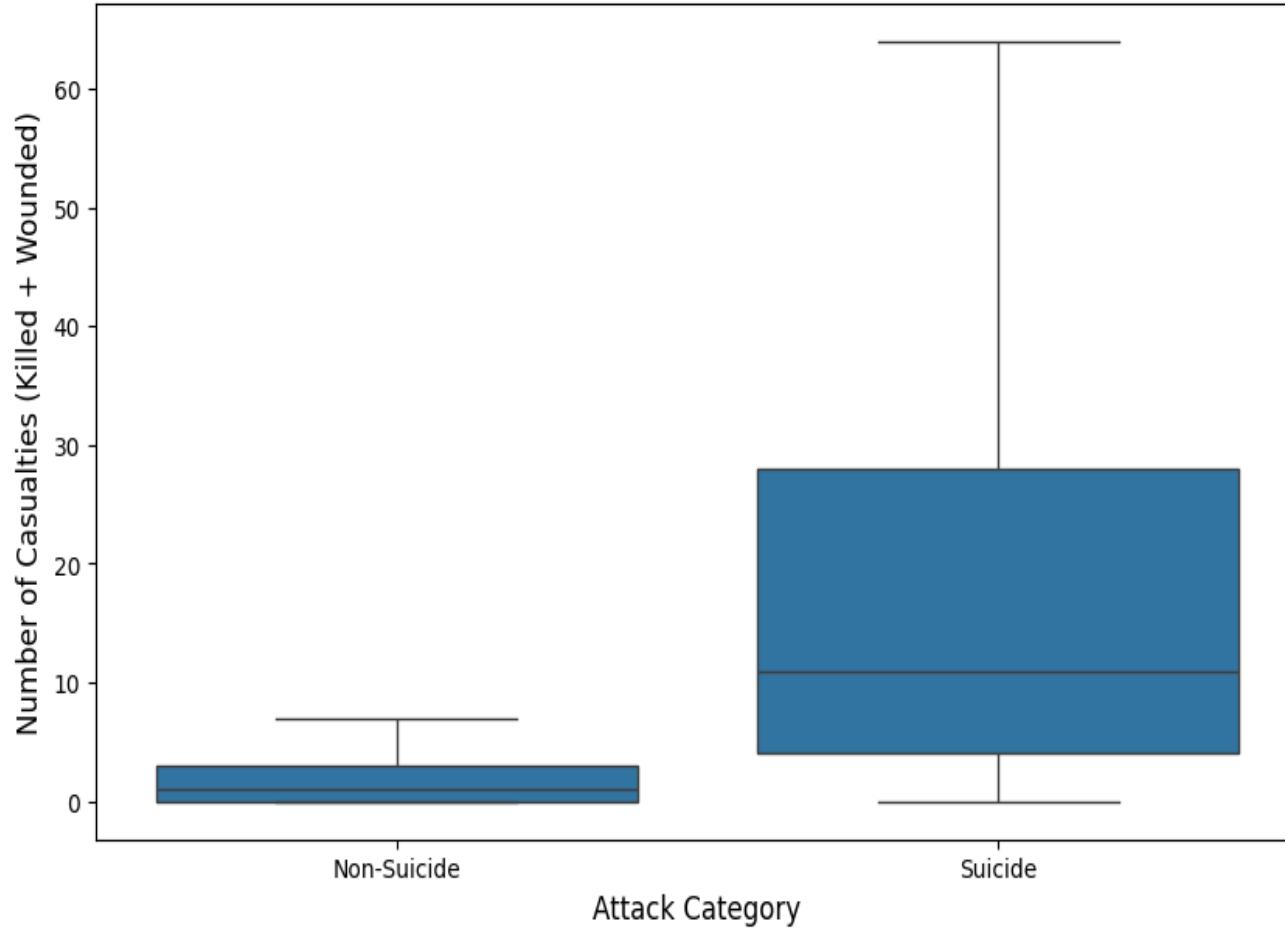


Key Insights:

- **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

Casualty Distribution: Suicide vs. Non-Suicide Attacks



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



Global Terrorism Database Analysis

[Deploy](#)

⋮

Filter Options

Select Year Range

 1970 2017

Select Region

- Central Am... ×
- North Ame... ×
- Southeast ... ×
- Western Eu... ×

An interactive dashboard exploring terrorist attacks from 1970 to 2017.

Total Attacks

181,691

Total Casualties

935,737

Most Active Group

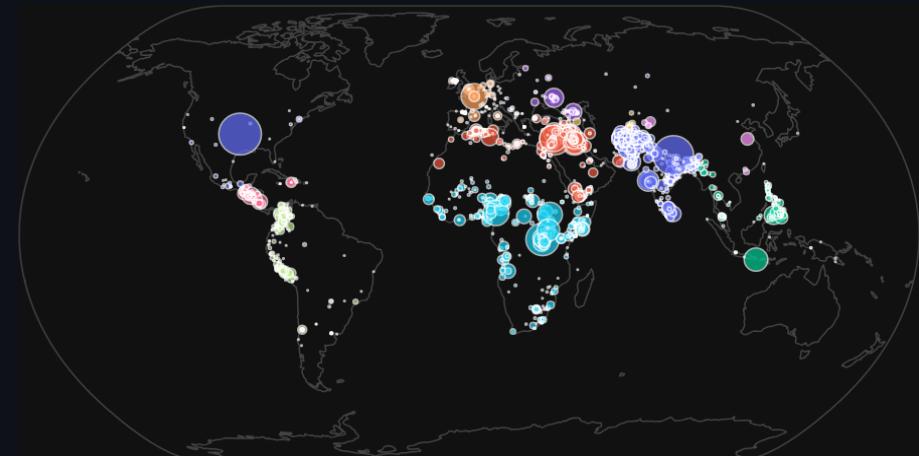
Taliban

Most Targeted Country

Iraq

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

Deploy



Filter Options

Select Year Range

1970 2017

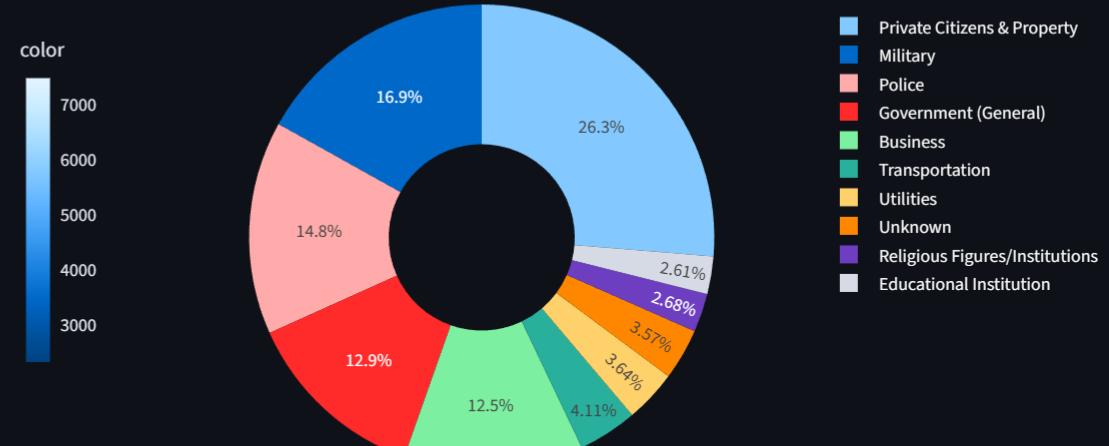
Select Region

- * Central Am... ×
- * North Ame... ×
- * Southeast ... ×
- * Western Eu... ×

🔥 Top Attacking Groups



🎯 Attack Targets



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



CONCLUSION

11

- **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

