



ANONYMOUS

What is Cyber Attack?

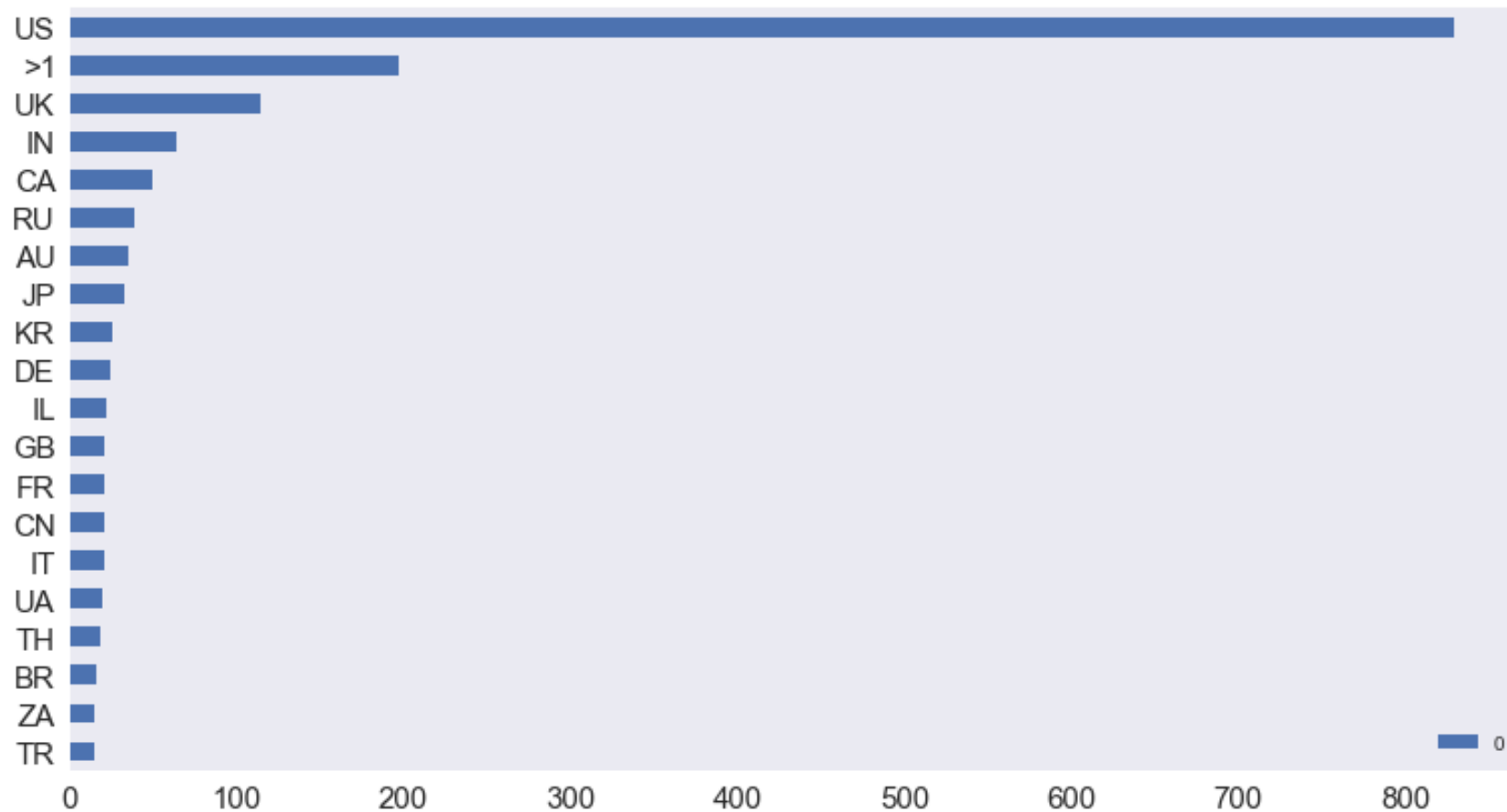
- Cyber attacks are malicious Internet operations launched mostly by criminal organizations looking to steal money, financial data, intellectual property or simply disrupt the operations of a certain company, individual or organization.
- Countries also get involved in so-called state-sponsored cyber attacks, where they seek to learn classified information on a geopolitical rival, or simply to “send a message”.
- The global cost of cyber crime for 2015 was **\$500 billion** (BOLD NUMBER).

Scraped the Hack out of me

- Website: www.hackmageddon.com
- Tools: Scrapy
- Scraped almost entire website!

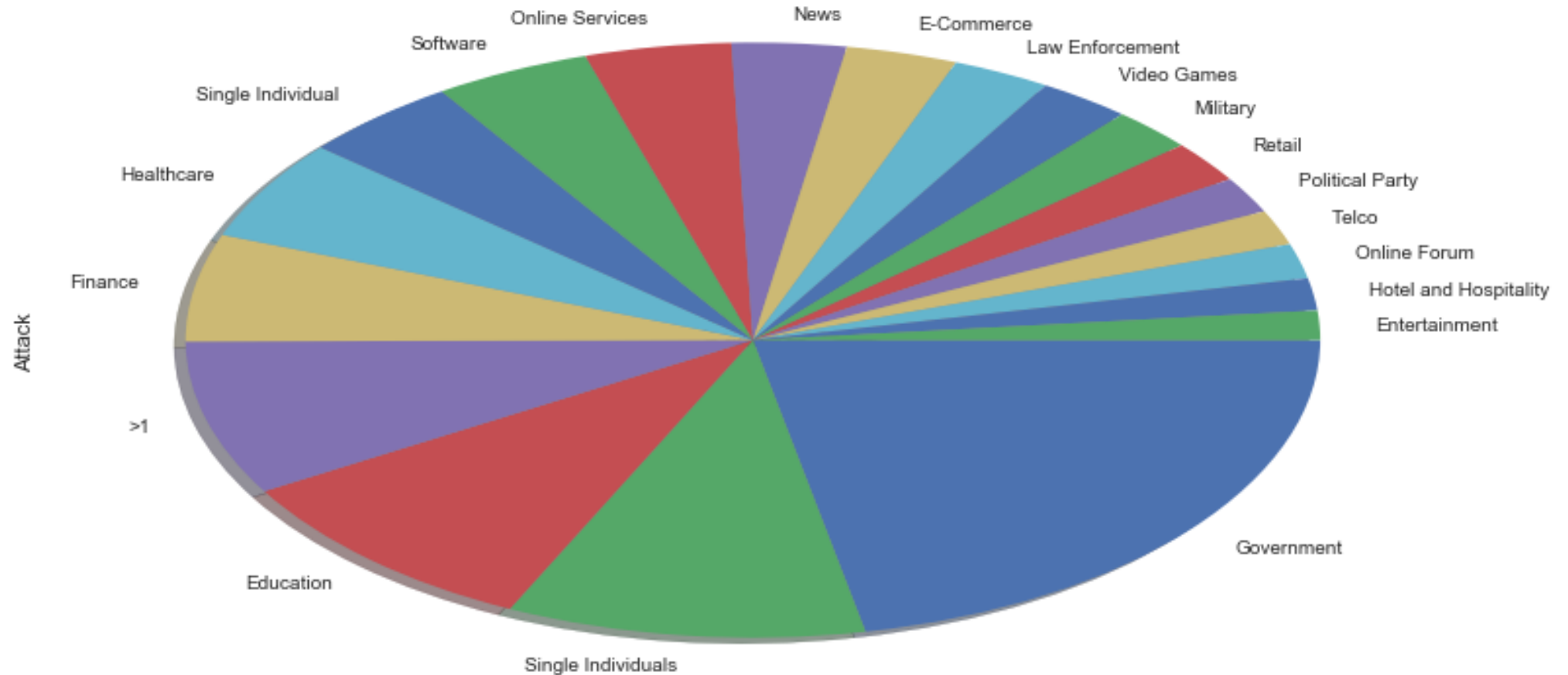
Attack Targets: Distribution By Country

US is the most attacked country.



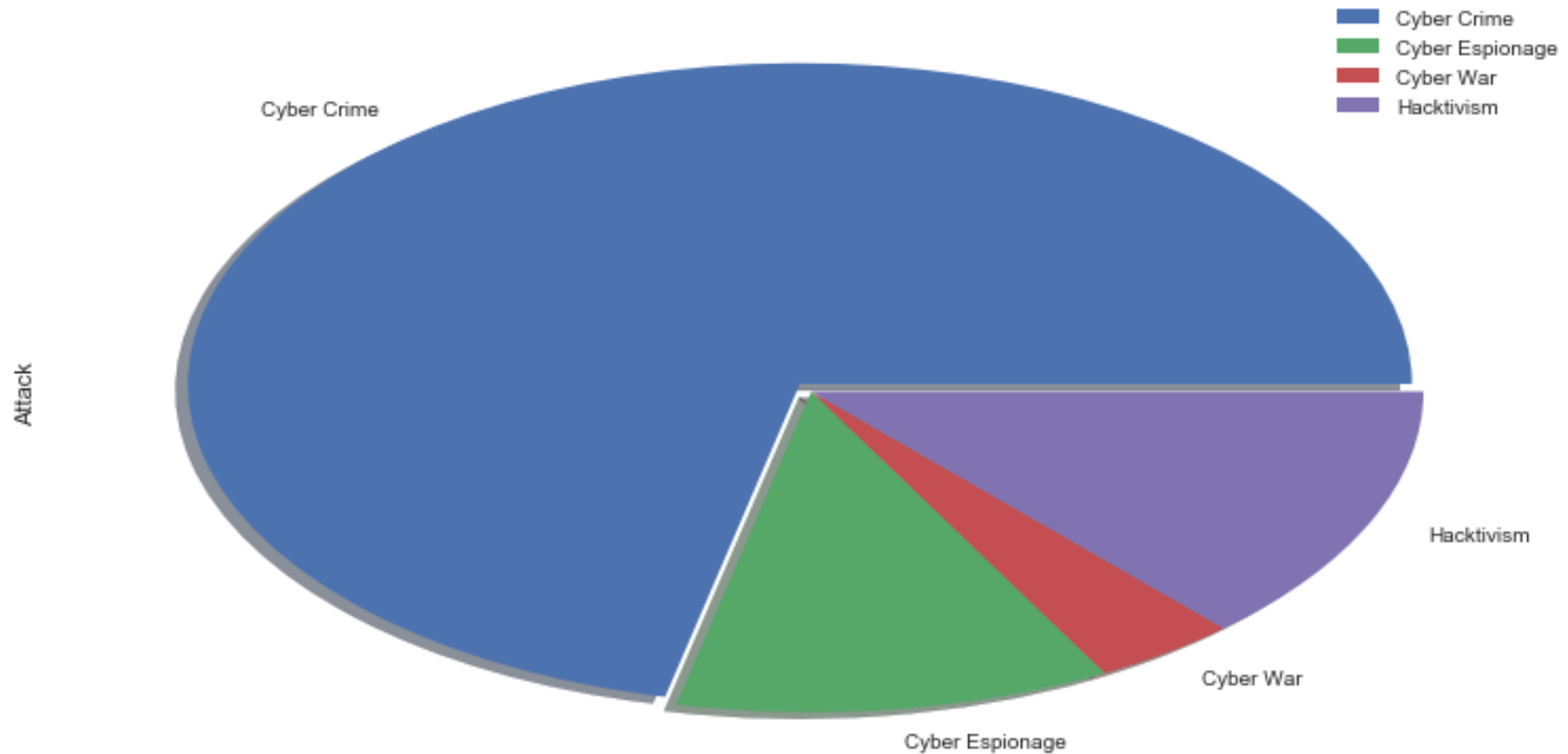
Attack Targets: Distribution by Organization Types

Government and single individuals are on top of the attackers' preferences.



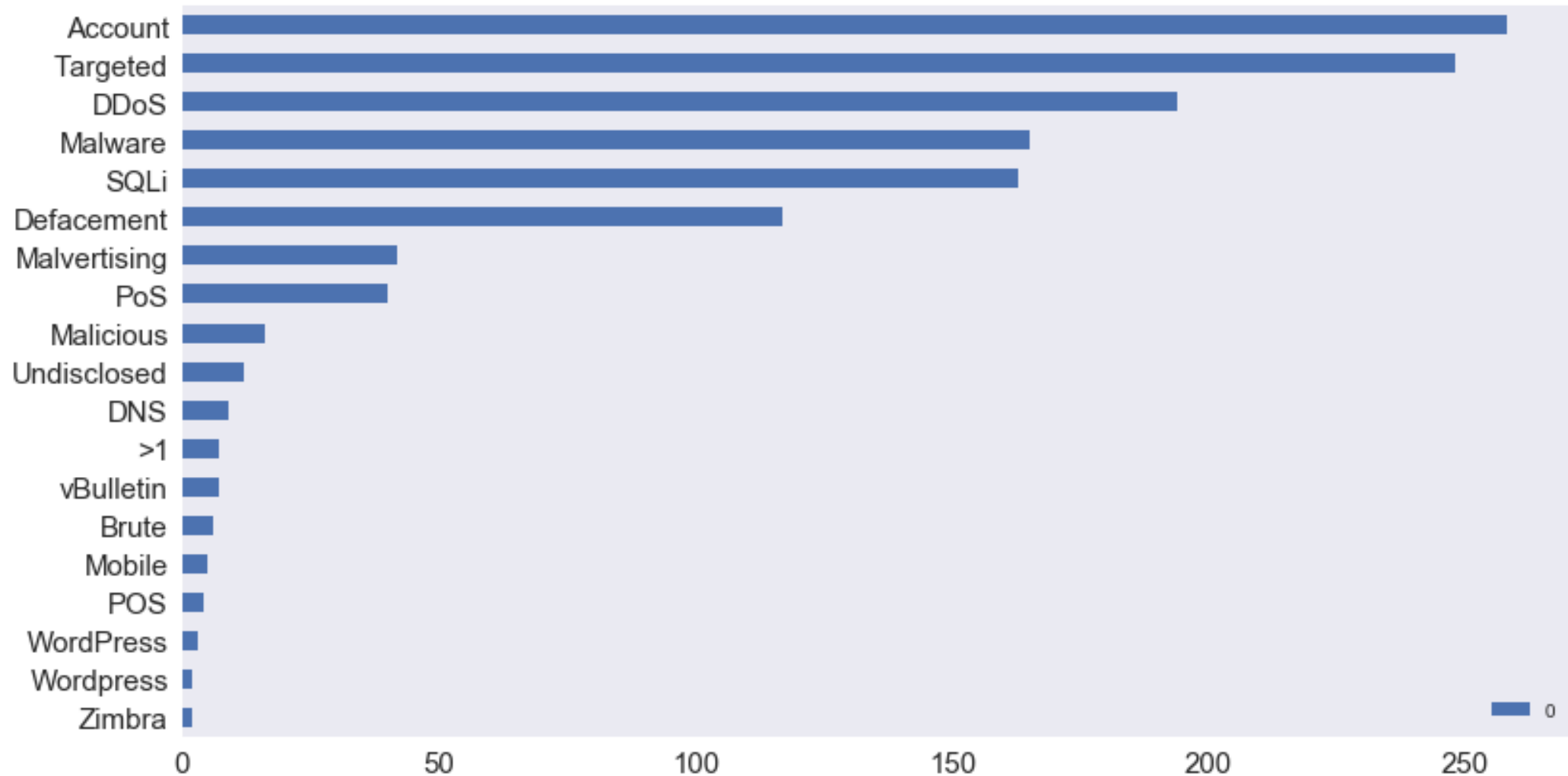
Motivation Behind Attacks

Cyber Crime leads the **Motivations** chart.



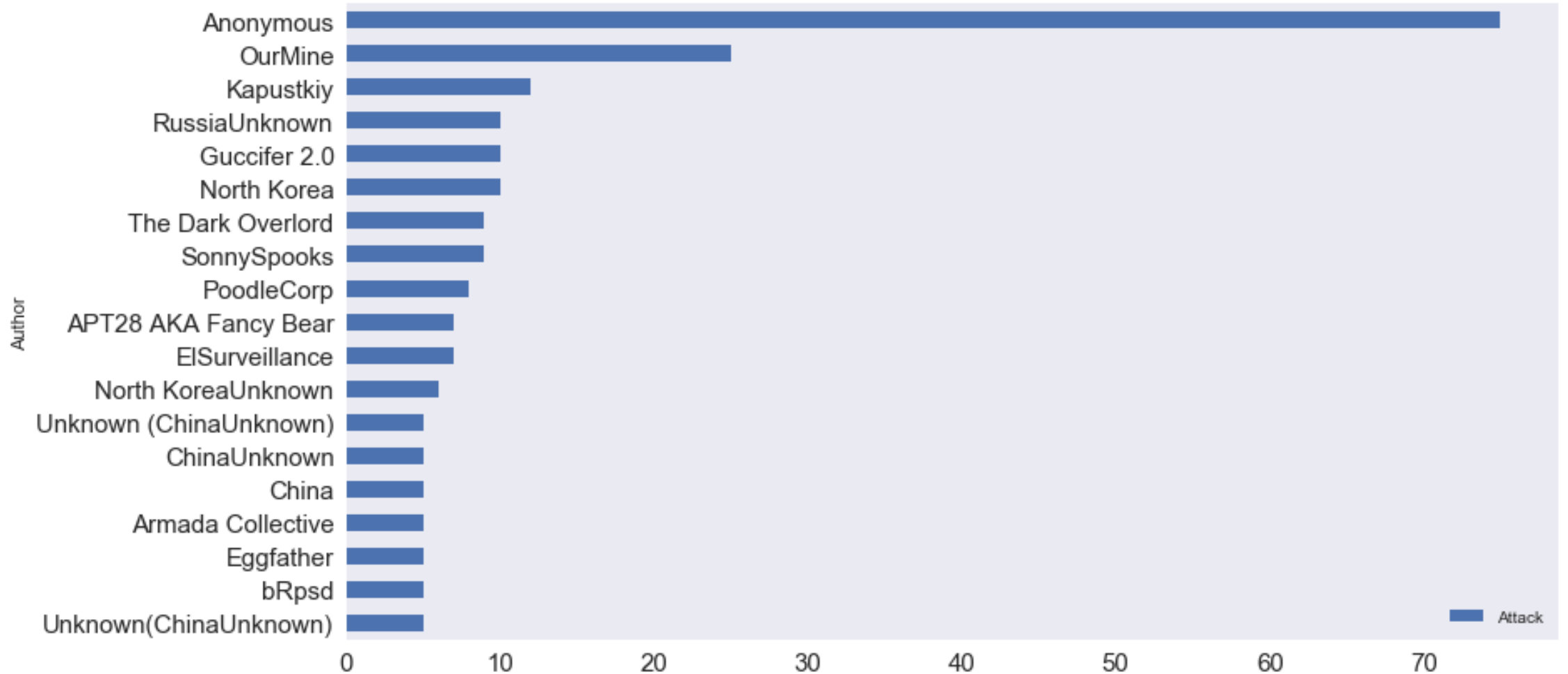
Attack Techniques

Account Hijackings and Targeted attacks rank on top of the **Attack Vectors**.



Notorious Hackers

Anonymous leads the hacking race with more than 75 attacks followed by OurMine.



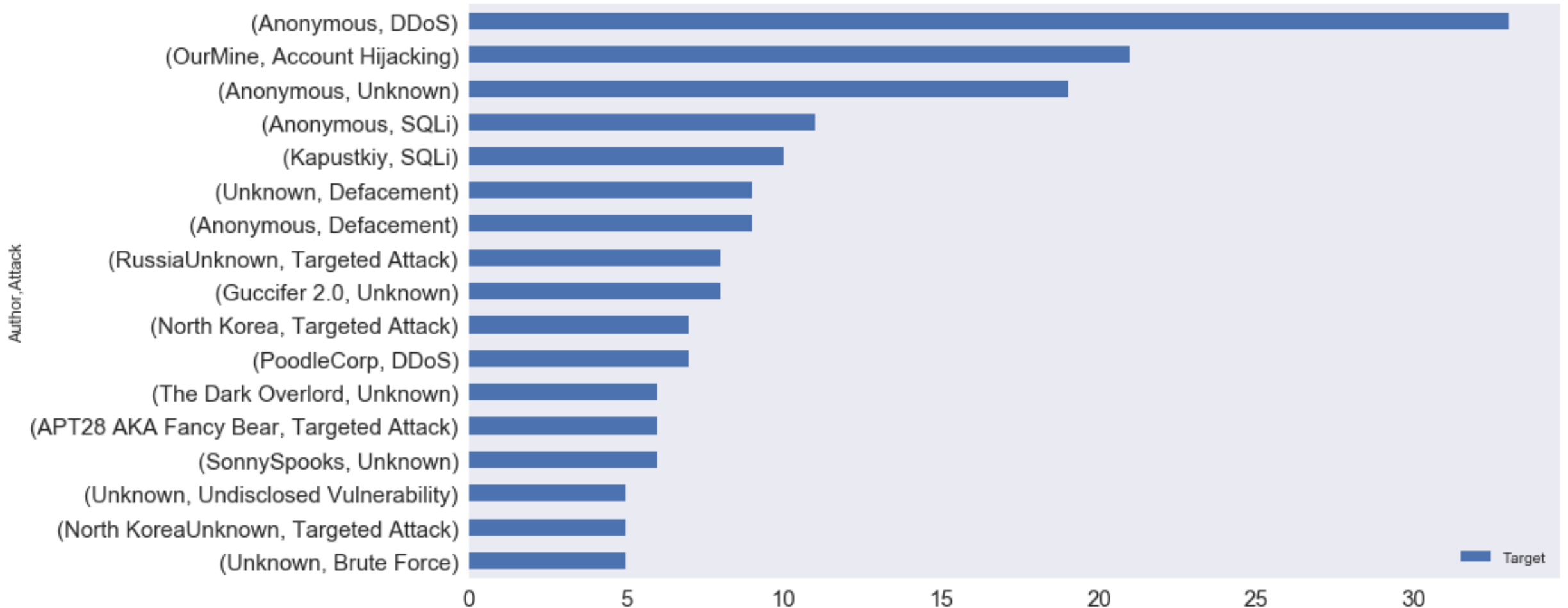
Attacks: Motivation and Techniques

According to the heat map, cyber crime class using Unknown technique has maximum number of attacks followed by Account Hijacking technique with Cyber Crime.



Cyber Attacks by Hackers and Techniques

Anonymous did more than 30 attacks with DDoS.



Cyber Attacks by Hackers, Organization and Country

➡	330	Guccifer 2.0	Political Party	US	9
	1090	Unknown	Social Network	US	9
	1162	Unknown	Video Games	US	9
	815	Unknown	Financial Services	US	9
	958	Unknown	News	US	8
	963	Unknown	Non-Profit	US	8
	109	Anonymous	Government	TH	7
	774	Unknown	Education	UK	7
	876	Unknown	Hospitality	US	7
➡	456	North Korea	Government	KR	7
	915	Unknown	Law Enforcement	US	6
	787	Unknown	Entertainment	US	6
	1036	Unknown	Retail	UK	6
	1061	Unknown	Single Individual	UK	6
	803	Unknown	Finance	RU	5
	667	Unknown	>1	JP	5
	1134	Unknown	Telco	US	5
➡	274	Eggfather	Online Forum	US	5
	766	Unknown	Education	CA	5
	1015	Unknown	Political Party	US	5

Natural Language Processing

- Tokenizing
- TF-IDF Vectorizer
- Cosine Similarity
- Multidimensional Scaling
- K-means Clustering

Summary

- Most attacked organization: Government
- Guccifer 2.0 was involved with 2016 United States presidential election.
- “Anonymous” performed most number of attacks.
- Account Hijacking is most common technique used by hackers.

Reference

- www.hackmageddon.com
- [https://en.wikipedia.org/wiki/Anonymous \(group\)](https://en.wikipedia.org/wiki/Anonymous_(group))
- <https://datasciencelab.wordpress.com/2013/12/12/clustering-with-k-means-in-python/>
- <http://blog.christianperone.com/2011/09/machine-learning-text-feature-extraction-tf-idf-part-i/>