



Escape From Tarkov

Ammo Chart

James Yi

Overview and Motivation:

For this project I decided to do an Escape From Tarkov ammo chart as I have been playing a lot of Escape From Tarkov with some friends. One of the main struggles they had was keeping track of what ammo is good for which guns in the game. They would be constantly googling which ammo is best since the in game information is very lackluster. So I decided to create a tool that catered towards their needs and wants in as simple a way as possible.

The project focuses on a simple website where a scatterplot of all the ammo in the game is displayed. Alongside the scatterplot, you can search for specific ammo type or guns, filter using specific trader levels and quests, and view how effective the ammo is to certain armor classes. The site was made from scratch using d3 and plain html, css, and javascript.

Related Work:

Searching around the internet, it seems the most popular site that was being used for this sort of information was <https://www.eft-ammo.com/ammo-graph>. While the visualization itself is great, there was a lot of functionality that was missing from it that would've been nice to include.

Questions:

The original question that I was trying to answer was "What is the best ammo I can use?" While that is still the main question that I am trying to answer, I found that broadening it to "How effective is certain ammo?" was a better idea. With information about every ammo, users can see how effective every ammo is to certain armor classes.

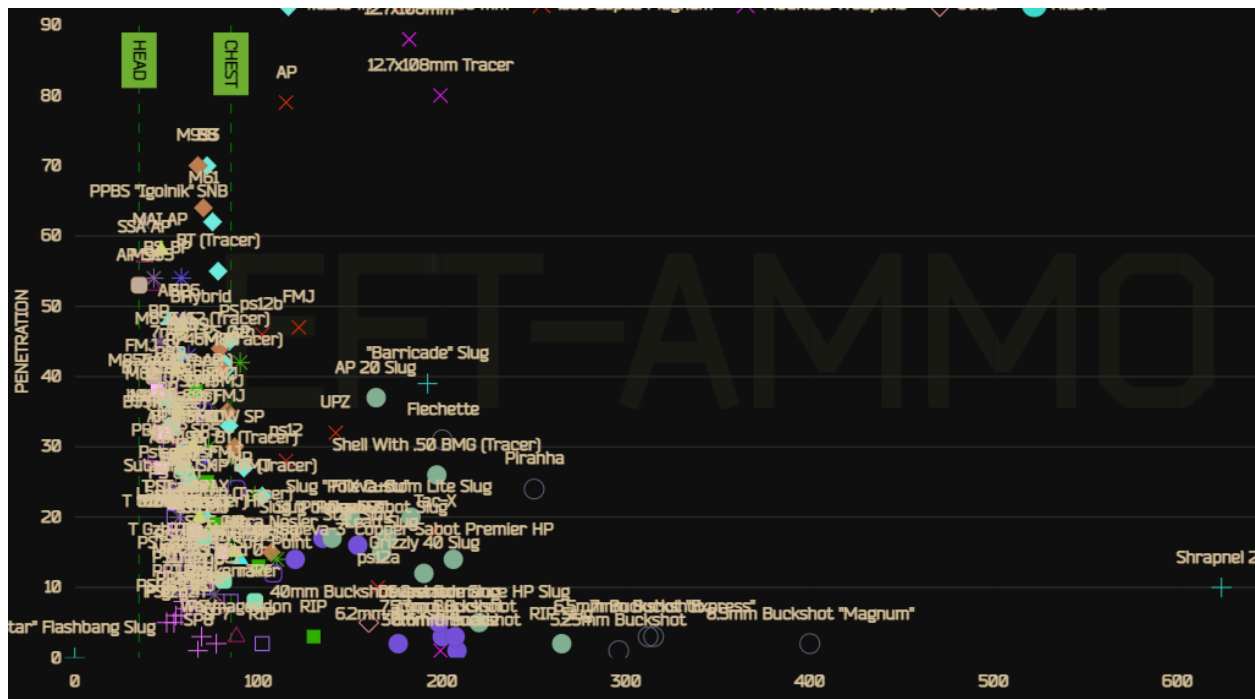
Data:

I obtained my data from <https://escapefromtarkov.fandom.com/wiki/Ballistics>. The site included all the ammo in the game. With the data, I then manually went in and added all the guns, quests, and trader levels for all the ammo.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Caliber	Name	DMG	Penetration Power								1	2	3	4	5	6	Quest Name	Shop	Guns
2	7.62x25mm	To 7.62x25mm TT LRNEC	66				7	5	0	0	0	0	0	0	0	0	0		Jaeger LL1	TT pistol, TT pi
3	7.62x25mm	To 7.62x25mm TT LRN	64				8	5	0	0	0	0	0	0	0	0	0		Jaeger LL1	TT pistol, TT pi
4	7.62x25mm	To 7.62x25mm TT FMJ43	60				11	6	1	0	0	0	0	0	0	0	0		Prapor LL1	TT pistol, TT pi
5	7.62x25mm	To 7.62x25mm TT AKBS	58				12	6	2	0	0	0	0	0	0	0	0		Prapor LL1	TT pistol, TT pi
6	7.62x25mm	To 7.62x25mm TT P.ql	58				14	6	3	0	0	0	0	0	0	0	0		Prapor LL2	TT pistol, TT pi
7	7.62x25mm	To 7.62x25mm TT PT gzh	55				18	6	4	0	0	0	0	0	0	0	0		Prapor LL2	TT pistol, TT pi
8	7.62x25mm	To 7.62x25mm TT Pst gzh	50				25	6	6	4	1	0	0	0	0	0	0		Prapor LL2	TT pistol, TT pi
9	9x18mm	Maka 9x18mm PM SP8 gzh	67				1	0	0	0	0	0	0	0	0	0	0			
10	9x18mm	Maka 9x18mm PM SP7 gzh	77				2	0	0	0	0	0	0	0	0	0	0		You've Got Mail	Prapor LL2
11	9x18mm	Maka 9x18mm PM PSV	69				3	0	0	0	0	0	0	0	0	0	0		Jaeger LL2	PB, PM, PM(t),
12	9x18mm	Maka 9x18mm PM P gzh	50				5	2	0	0	0	0	0	0	0	0	0		Prapor LL1	PB, PM, PM(t),
13	9x18mm	Maka 9x18mm PM PSO gzh	54				5	2	0	0	0	0	0	0	0	0	0		Prapor LL1	PB, PM, PM(t),
14	9x18mm	Maka 9x18mm PM PS gs PPO	55				6	3	0	0	0	0	0	0	0	0	0		Prapor LL1	PB, PM, PM(t),
15	9x18mm	Maka 9x18mm PM PRS gs	58				6	3	0	0	0	0	0	0	0	0	0		Prapor LL1	PB, PM, PM(t),
16	9x18mm	Maka 9x18mm PM PPe gzh	61				7	4	0	0	0	0	0	0	0	0	0		Prapor LL1	PB, PM, PM(t),
17	9x18mm	Maka 9x18mm PM PPT gzh	59				8	5	1	0	0	0	0	0	0	0	0		Prapor LL1	PB, PM, PM(t),
18	9x18mm	Maka 9x18mm PM Pst gzh	50				12	6	1	0	0	0	0	0	0	0	0		Prapor LL1	PB, PM, PM(t),
19	9x18mm	Maka 9x18mm PM RG028 gzh	65				13	6	2	0	0	0	0	0	0	0	0		Prapor LL1	PB, PM, PM(t),
20	9x18mm	Maka 9x18mm PM BZHT gzh	53				18	6	5	1	0	0	0	0	0	0	0		Prapor LL2	PB, PM, PM(t),
21	9x18mm	Maka 9x18mm PMM PstM gzh	58				24	6	6	4	0	0	0	0	0	0	0		Prapor LL2	PB, PM, PM(t),
22	9x18mm	Maka 9x18mm PM PBM gzh	40				28	6	6	5	1	0	0	0	0	0	0		Prapor LL2	PB, PM, PM(t),
23	9x19mm	Parat 9x19mm RIP	102				2	0	0	0	0	0	0	0	0	0	0			Glock 17, Gloc
24	9x19mm	Parat 9x19mm QuakeMaker	85				8	6	1	0	0	0	0	0	0	0	0		Peacekeeper LL	Glock 17, Gloc
25	9x19mm	Parat 9x19mm PSO gzh	59				10	6	2	0	0	0	0	0	0	0	0		Prapor LL1, Jae	Glock 17, Gloc
26	9x19mm	Parat 9x19mm Luger CCl	70				10	6	2	0	0	0	0	0	0	0	0		Mechanic LL3	Glock 17, Gloc
27	9x19mm	Parat 9x19mm Green Tracer	58				14	6	3	1	0	0	0	0	0	0	0		Mechanic LL1	Glock 17, Gloc
28	9x19mm	Parat 9x19mm FMJ M882	56				18	6	5	2	0	0	0	0	0	0	0		Peacekeeper LL	Glock 17, Gloc
29	9x19mm	Parat 9x19mm Pst gzh	54				20	6	6	2	0	0	0	0	0	0	0		Prapor LL2, Mec	Glock 17, Gloc

Exploratory Data Analysis:

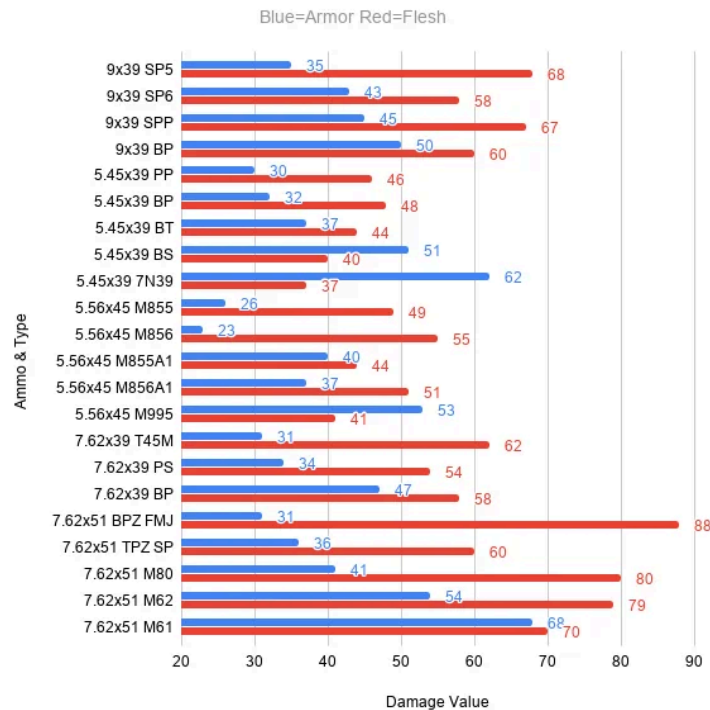
The only visualization I used to view my data was the visualization from the related work. I learned from it that it lacked a lot of features that would've been nice to have such as a search bar. Outside of that, I viewed all my data in table form from the Escape From Tarkov wiki pages.



Design Evolution:

The main factor for deciding which ammo was the best is the “Penetration Damage”. Since that was the main factor I thought a chart comparing just the penetration between all the ammo would have sufficed. Something like the bar chart below

Rifle Ammo Penetration and Flesh Damage Chart 12.2.5479



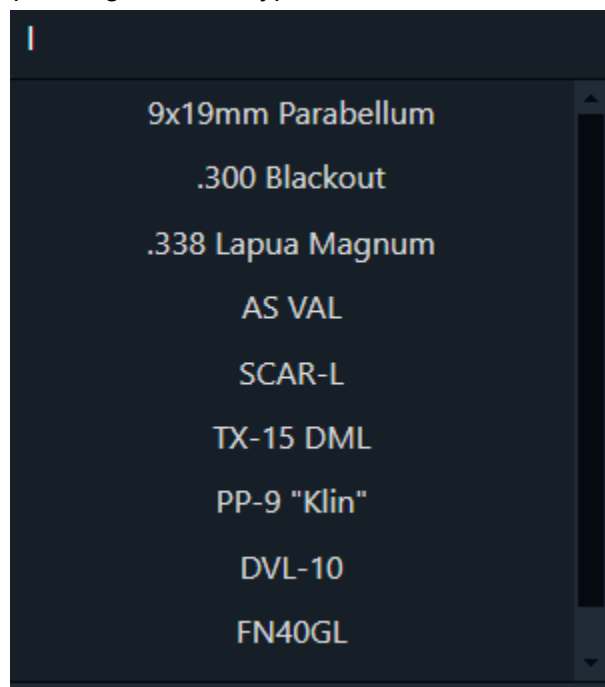
The main issue with the bar chart was that it already looked cluttered with a few ammo types that were displayed. If I wanted to display all the ammo and not just the ammo types, I needed a visualization that could fit all of that. So I decided a scatter plot would have been better with the x/y being damage/penetration.

When I was done with the scatter plot and implementing the tooltip for hovering over each point, I realized that one of the data columns is bullet speed. So I had the idea of implementing an animated gauge in the tooltip to show the speed of the bullet.

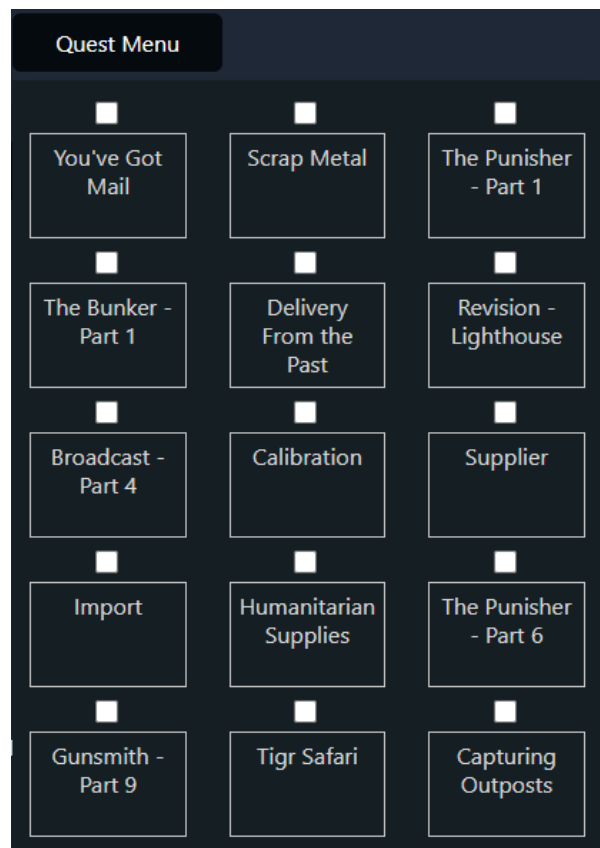


Implementation:

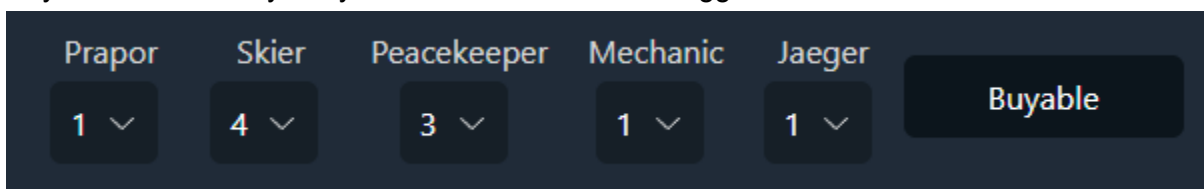
After creating the scatter plot, I worked on the logic for filtering out specific data points. The first thing I worked on was creating a search bar for the scatter plot. I had to create a list of all possible search options so that I could implement a suggestion box in case the user did not know the full name of a specific gun/ammo type.



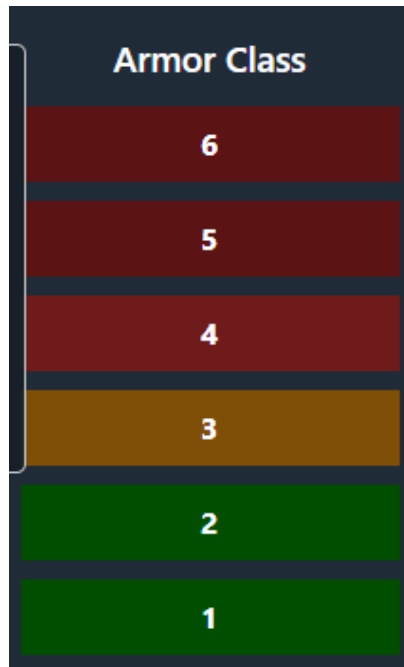
After that the next filtering option was whether or not a specific quest was completed in game. So I decided to do a popup menu that contains a checklist of all the possible quests that unlock ammo.



Once that was complete the only other filtering I needed to add was how the ammo was obtained. What that means is what trader level you need to buy the ammo. There is also ammo that you can never buy but you can find so I added a toggle for that as well.



As an additional visualization, I added an animated meter to the right of the scatter plot. This meter displays what armor class the ammo you hover over can penetrate through. Green being good and red being bad.



Evaluation:

Through my visualization, I learned that there actually isn't that many ammo that is unlocked through quests. Most of the ammos are just unlocked through trader levels. But as someone who has played this game a lot, I had a lot of knowledge already about the data set. I do believe however that this visualization can help newer players a lot when it comes to knowing which ammo is best for the gun they are using. So it does answer my previous question of "What is the best ammo I can use?" For the future, I would improve my visualization by making the scatter plot more pretty. I don't have a lot of design experience so making things look nice was very difficult.

