Data Collection

Data were sourced from Open Data Philippines (https://data.gov.ph). Files in PDF format were collected from the years 2012-2021 and then converted into .xlsx format.

Data Cleaning and Transformation

Files were merged into a single worksheet. A new column for the year was added to determine which year the data is from. Various cleaning methods were applied to make sure that the data is correct compared to the original dataset. Some methods used were conditional formatting and sanity checks such as the SUM function. Shown below are some cells that have string entries instead of numerical entries. Data were also converted into a consistent format.

	CIRCUMFERENCIAL AND RADIAL ROAD	VOLUME									
		CAR	PUJ	UV	TAXI	PUB	TRUCK	TRAILER	MC	TRICYCLE	TOTAL
C:1	RECTO	27,447	3,980	12	4,844	431	924	80	45,082	1,660	84,460
C:2	MENDOZA	37,472	3,384	9	3,575	68	8,186	1,897	54,136	662	109,369
	PRES.QUIRINOAVE.	30,942	94	10	2.789	56	3,397	754	33,872	668	72,542
C:3	ARANETAAVE.	58,726	0	9	2,361	1	2,200	447	36,033	488	100,266
c:4	EDSA	t99,402	1,638	2,604	19,287	5,527	2,188	45	141,564	16	372,271
C:5	C.P. GARCIA/ KATIPUNANAVE. /TANDANG SORA	99,316	289	2,121	4,685	340	10,535	1,281	93,681	37	212,Z80
R:1	ROXASBLVD.	95,063	9,366	1,988	11,734	1,575	3,076	1,849	81,895	2,793	208,339
R:2	TAFTAVE.	43,676	8,552	4,400	5,970	1,865	1,022	7	45,416	3,807	114,715
R:3	SSH	96,111	1E+7	80	5,740	367	6,664	2,093	75,867	80	167,169
R:4	SHAWBLVD.	48,612	1,127	757	7,958	325	798	tQ1	45,517	10	105,205
R:5	ORTIGASAVE.	73,145	6,866	3,619	3,176	3,177	4,571	486	50,210	449	165,699
R:6	MAGSAYSAY BLVD.	57,031	5,043	43	7,255	391	2,138	380	66,360	1,292	139,933
	AURORABLVD.	36,367	7,424	1,458	4,200	1,005	1,9Z2	20	48,318	98	100,612
R:7	QUEZONAVE.	120,383	2,094	2,813	13,139	1,111	4,493	287	117,718	90	262,126
	COMMONWEALTHAVE.	135,153	1,740	4,879	14,663	5,879	5.914	366	133,591	131	302,318
R:8	A.BONIFACIO	27,772	3,247	53	1,101	550	8,334	1,162	29,066	1,222	72,507
R:9	RIZALAVE.	33,217	6,683	28	3,494	543	2,788	0	59,406	747	106,906
R:10	DELPAN	39,187	630	38	2,391	147	6,043	6,506	44,121	3,753	102,616
	MARCOSHIGHWAY	109,691	7,682	882	7,659	480	6,687	522	99,611	252	233,466
	MCARTHURHIGHWAY	30,529	3,740	2	4,834	855	2,858	194	80,178	200	123,390

Some changes were made to make it visually organized.

ROAD -	AREA 🔽	YEAR •	CAR -	PUJ -	PUB -	TRUCI -	TRAILEI -	MC -	TRI -	UV -	TAXI -	TOTAL per Are:	
C:1	RECTO	2012	20926	15845	872	702	250	7359	1828	0	0	47,782	
C:2	MENDOZA	2012	40034	1514	319	5253	1237	10992	325	0	0	59,674	
C:2	PRES. QUIRINO AVE.	2012	99264	5019	500	7788	2556	23336	362	0	0	138,825	
C:3	ARANETAAVE,	2012	51390	1432	55	4401	411	14730	671	0	0	73,090	
C:4	EDSA	2012	264067	3292	15214	5023	43	38859	6	0	0	326,504	
C:5	C.P. GARCIA/ KATIPUNAN AVE. / TANDANG SORA	2012	122403	2274	52	7289	554	17510	7905	0	0	157,987	
R:1	ROXAS BLVD.	2012	123505	300	2856	363	37	23168	13	0	0	150,242	
R:2	TAFTAVE.	2012	27273	6344	2878	223	13	5151	394	0	0	42,276	
R:3	SSH	2012	92053	20	1040	7703	3413	18186	45	0	0	122,460	
R:4	SHAWBLVD.	2012	58292	11637	56	1493	200	15539	0	0	0	87,217	
R:5	ORTIGAS AVE.	2012	73479	7982	1077	1858	212	17838	0	0	0	102,446	
R:6	MAGSAYSAY BLVD.	2012	60568	6974	1377	2269	289	14264	317	0	0	86,058	
R:6	AURORABLVD.	2012	78434	19215	173	4124	326	21890	608	0	0	124,770	
R:7	QUEZONAVE.	2012	106611	11589	2074	3110	389	19826	81	0	0	143,680	

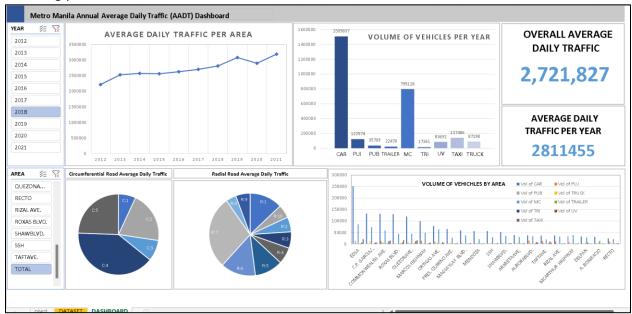
Data Analysis

The dataset was analyzed using pivot tables to answer the objectives of the analysis.

YEAR	2018	Ţ,	_	_	_		_			
AREA	(Multiple Items)	Ψ,								
Sum of CAR	Vol of PUJ		Vol of PUB	Vol of TRAI	Vol of MC	Vol of TRI	Vol of UV	Vol of TAX	Vol of TRU	CK
1509837		122574	35709	22470	795128	17361	83692	137486	87198	

Data Visualization

Slicers were added to make the dashboard interactive. Pivot tables are connected to the graph accordingly.



Conclusion

The trends show a significant increase in traffic every year.

Cars have the largest contribution to the volume of cars in the Metro Manila area daily.

EDSA has the most traffic from 2012-2021.

Recommendations

Additional data aside from the volume of vehicles would be beneficial to determine the causes of traffic more accurately such as accidents, road damages, speed, etc. that may contribute to traffic congestion.