



Week 6

**EDA**

Using Python

Winter Internship

By Arijit Dhali

# Week 6

# Indian

# Cars EDA



# Data Processing

## Uncleaned

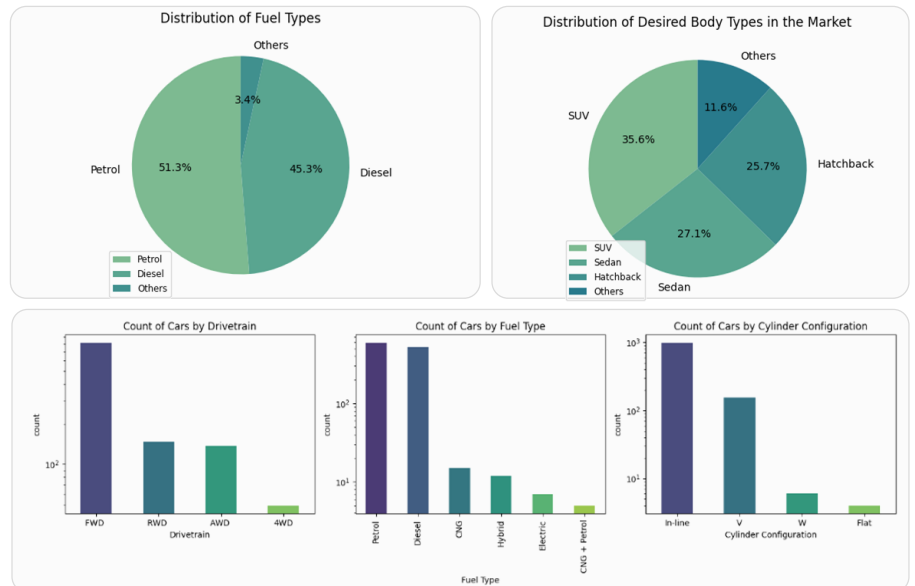
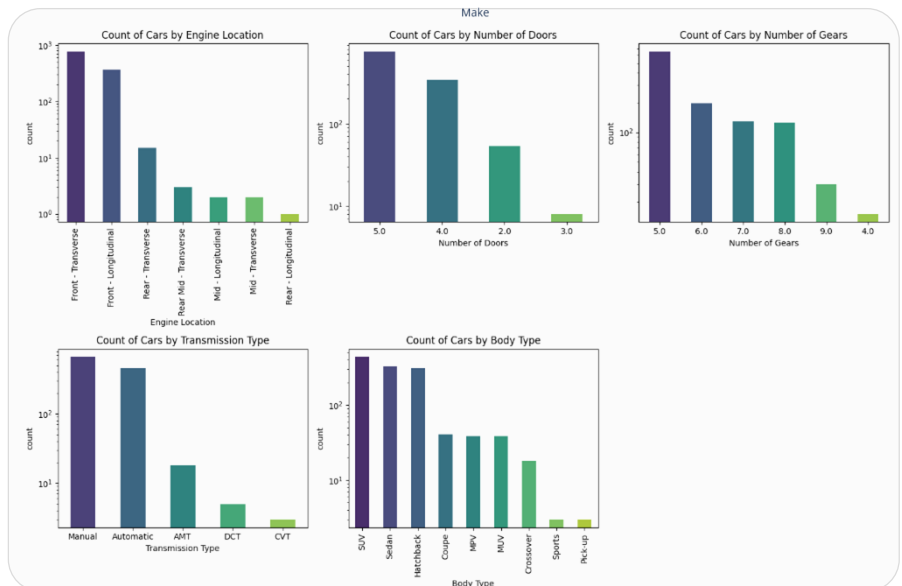
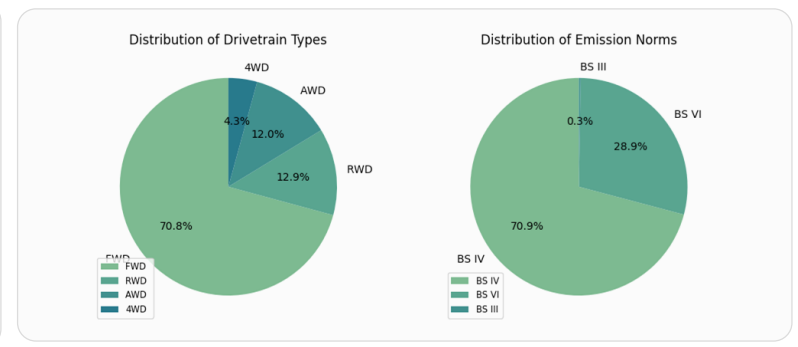
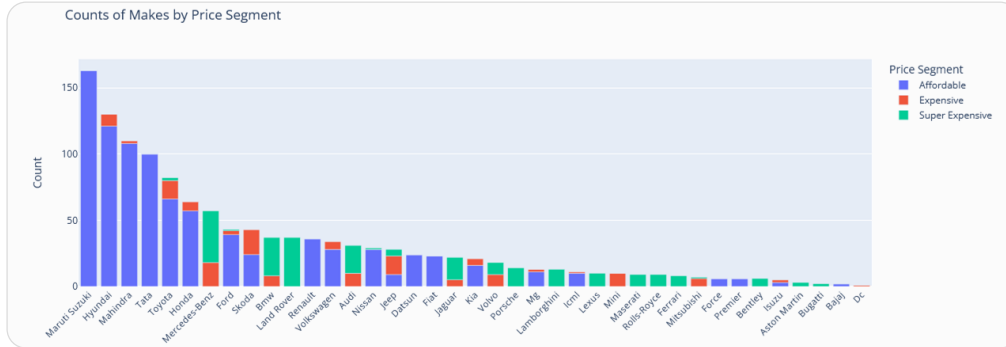
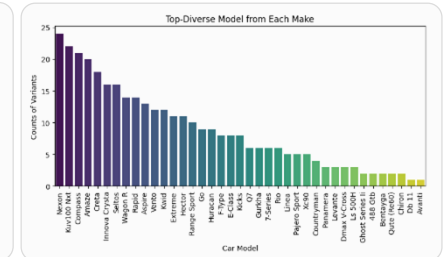
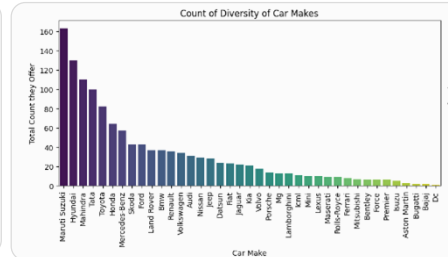
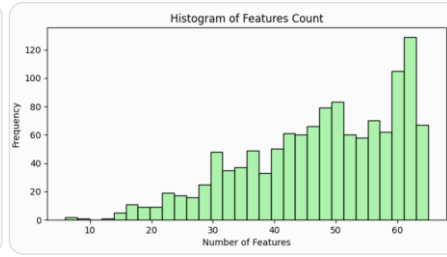
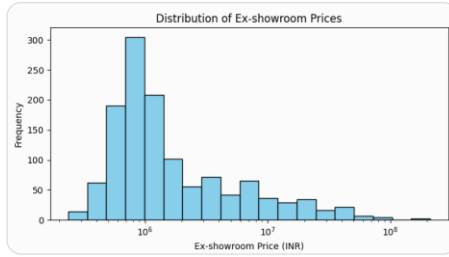
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1		Make	Model	Variant	Ex-Showr	Displacement	Cylinders	Valves_Pe	Drivetrain	Cylinder	Emission	Engine_L	Fuel_Syst	Fuel_Tank	Fuel_Type	Height	Length	Width	Body_Type	Doors	City_M
2	0	Tata	Nano Gen Xt		Rs. 2,92,66	624 cc	2	2	RWD	(Rea In-line	BS IV	Rear, Tran	Injection	24 litres	Petrol	1652 mm	3164 mm	1750 mm	Hatchback	5	723.6
3	1	Tata	Nano Gen Xe		Rs. 2,36,44	624 cc	2	2	RWD	(Rea In-line	BS IV	Rear, Tran	Injection	24 litres	Petrol	1652 mm	3164 mm	1750 mm	Hatchback	5	723.6
4	2	Tata	Nano Gen Emax Xm		Rs. 2,96,66	624 cc	2	2	RWD	(Rea In-line	BS IV	Rear, Tran	Injection	15 litres	CNG	1652 mm	3164 mm	1750 mm	Hatchback	4	
5	3	Tata	Nano Gen Xta		Rs. 3,34,74	624 cc	2	2	RWD	(Rea In-line	BS IV	Rear, Tran	Injection	24 litres	Petrol	1652 mm	3164 mm	1750 mm	Hatchback	5	723.6
6	4	Tata	Nano Gen Xm		Rs. 2,72,22	624 cc	2	2	RWD	(Rea In-line	BS IV	Rear, Tran	Injection	24 litres	Petrol	1652 mm	3164 mm	1750 mm	Hatchback	5	723.6
7	5	Tata	Nano Gen Xma		Rs. 3,14,81	624 cc	2	2	RWD	(Rea In-line	BS IV	Rear, Tran	Injection	24 litres	Petrol	1652 mm	3164 mm	1750 mm	Hatchback	5	723.6
8	6	Datsun	Redi-Go D		Rs. 2,79,65	799 cc	3	4	FWD	(Fror In-line	BS IV	Front, Trai	Injection	28 litres	Petrol	1541 mm	3429 mm	1560 mm	Hatchback	5	21.38
9	7	Datsun	Redi-Go T		Rs. 3,51,85	799 cc	3	4	FWD	(Fror In-line	BS IV	Front, Trai	Injection	28 litres	Petrol	1541 mm	3429 mm	1560 mm	Hatchback	5	21.38
10	8	Datsun	Redi-Go A		Rs. 3,33,41	799 cc	3	4	FWD	(Fror In-line	BS IV	Front, Trai	Injection	28 litres	Petrol	1541 mm	3429 mm	1560 mm	Hatchback	5	21.38
11	9	Datsun	Redi-Go S		Rs. 3,62,00	799 cc	3	4	FWD	(Fror In-line	BS IV	Front, Trai	Injection	28 litres	Petrol	1541 mm	3429 mm	1560 mm	Hatchback	5	21.38
12	10	Datsun	Redi-Go 1.0 S		Rs. 3,90,00	999 cc	3	4	FWD	(Fror In-line	BS IV	Front, Trai	Injection	28 litres	Petrol	1541 mm	3429 mm	1560 mm	Hatchback	5	
13	11	Datsun	Redi-Go 1.0 S Amt		Rs. 4,37,04	999 cc	3	4	FWD	(Fror In-line	BS IV	Front, Trai	Injection	28 litres	Petrol	1541 mm	3429 mm	1560 mm	Hatchback	5	
14	12	Renault	Kwid Rxe 0.8		Rs. 3,53,25	799 cc	3	4	FWD	(Fror In-line	BS 6	Front, Trai	Injection	28 litres	Petrol	1490 mm	3731 mm	1579 mm	Hatchback	5	25.17
15	13	Renault	Kwid Std 0.8		Rs. 2,83,25	799 cc	3	4	FWD	(Fror In-line	BS 6	Front, Trai	Injection	28 litres	Petrol	1490 mm	3731 mm	1579 mm	Hatchback	5	25.17
16	14	Renault	Kwid Rxl 0.8		Rs. 3,83,25	799 cc	3	4	FWD	(Fror In-line	BS 6	Front, Trai	Injection	28 litres	Petrol	1490 mm	3731 mm	1579 mm	Hatchback	5	25.17
17	15	Renault	Kwid Rxt 0.8		Rs. 4,13,25	799 cc	3	4	FWD	(Fror In-line	BS 6	Front, Trai	Injection	28 litres	Petrol	1490 mm	3731 mm	1580 mm	Hatchback	5	25.17
18	16	Renault	Kwid Rxt 1.0		Rs. 4,33,25	999 cc	3	4	FWD	(Fror In-line	BS 6	Front, Trai	Injection	28 litres	Petrol	1490 mm	3731 mm	1579 mm	Hatchback	5	25.17
19	17	Renault	Kwid Climber 1. Rs.		4,54,45	999 cc	3	4	FWD	(Fror In-line	BS 6	Front, Trai	Injection	28 litres	Petrol	1490 mm	3731 mm	1579 mm	Hatchback	5	25.17
20	18	Renault	Kwid Rxt Amt 1. Rs.		4,63,25	999 cc	3	4	FWD	(Fror In-line	BS 6	Front, Trai	Injection	28 litres	Petrol	1490 mm	3731 mm	1579 mm	Hatchback	5	25.17
21	19	Renault	Kwid Climber A Rs.		4,84,45	999 cc	3	4	FWD	(Fror In-line	BS 6	Front, Trai	Injection	28 litres	Petrol	1490 mm	3731 mm	1579 mm	Hatchback	5	25.17
22	20	Renault	Kwid Rxt (O) 1. Rs.		4,40,95	999 cc	3	4	FWD	(Fror In-line	BS 6	Front, Trai	Injection	28 litres	Petrol	1490 mm	3731 mm	1579 mm	Hatchback	5	25.17
23	21	Renault	Kwid Rxt (O) An Rs.		4,70,95	999 cc	3	4	FWD	(Fror In-line	BS 6	Front, Trai	Injection	28 litres	Petrol	1490 mm	3731 mm	1579 mm	Hatchback	5	25.17
24	22	Renault	Kwid Climber (Rs.		4,62,15	999 cc	3	4	FWD	(Fror In-line	BS 6	Front, Trai	Injection	28 litres	Petrol	1490 mm	3731 mm	1579 mm	Hatchback	5	25.17
25	23	Renault	Kwid Climber (Rs.		4,92,15	999 cc	3	4	FWD	(Fror In-line	BS 6	Front, Trai	Injection	28 litres	Petrol	1490 mm	3731 mm	1579 mm	Hatchback	5	25.17

## Cleaned

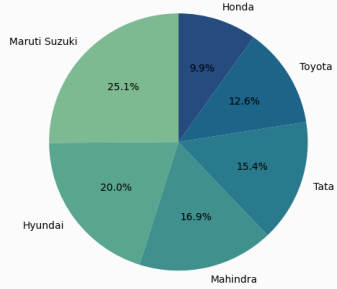
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1	make	model	variant	ex-showr	displacem	cylinders	valves_pe	drivetrain	cylinder	emission	engine_lo	fuel_syste	fuel_tank	fuel_type	height_m	length_m	width_m	body_type	doors	arai_certif	kerb_w
2	Tata	Nano Gen Xt		292667	624	2	2	RWD	In-line	BS IV	Rear - Trai	Injection	24	Petrol	1652	3164	1750	Hatchback	5	23.6	
3	Tata	Nano Gen Xe		236447	624	2	2	RWD	In-line	BS IV	Rear - Trai	Injection	24	Petrol	1652	3164	1750	Hatchback	5	23.6	
4	Tata	Nano Gen Emax Xm		296661	624	2	2	RWD	In-line	BS IV	Rear - Trai	Injection	15	CNG	1652	3164	1750	Hatchback	4	36	
5	Tata	Nano Gen Xta		334768	624	2	2	RWD	In-line	BS IV	Rear - Trai	Injection	24	Petrol	1652	3164	1750	Hatchback	5	21.9	
6	Tata	Nano Gen Xm		272223	624	2	2	RWD	In-line	BS IV	Rear - Trai	Injection	24	Petrol	1652	3164	1750	Hatchback	5	23.6	
7	Tata	Nano Gen Xma		314815	624	2	2	RWD	In-line	BS IV	Rear - Trai	Injection	24	Petrol	1652	3164	1750	Hatchback	5	21.9	
8	Datsun	Redi-Go D		279650	799	3	4	FWD	In-line	BS IV	Front - Trai	Injection	28	Petrol	1541	3429	1560	Hatchback	5	25.17	12
9	Datsun	Redi-Go T		351832	799	3	4	FWD	In-line	BS IV	Front - Trai	Injection	28	Petrol	1541	3429	1560	Hatchback	5	25.17	12
10	Datsun	Redi-Go A		333419	799	3	4	FWD	In-line	BS IV	Front - Trai	Injection	28	Petrol	1541	3429	1560	Hatchback	5	25.17	12
11	Datsun	Redi-Go S		362000	799	3	4	FWD	In-line	BS IV	Front - Trai	Injection	28	Petrol	1541	3429	1560	Hatchback	5	25.17	12
12	Datsun	Redi-Go 1.0 S		390000	999	3	4	FWD	In-line	BS IV	Front - Trai	Injection	28	Petrol	1541	3429	1560	Hatchback	5	22.5	12
13	Datsun	Redi-Go 1.0 S Amt		437065	999	3	4	FWD	In-line	BS IV	Front - Trai	Injection	28	Petrol	1541	3429	1560	Hatchback	5	23	12
14	Renault	Kwid Rxe 0.8		353290	799	3	4	FWD	In-line	BS VI	Front - Trai	Injection	28	Petrol	1490	3731	1579	Hatchback	5	25.17	
15	Renault	Kwid Std 0.8		283290	799	3	4	FWD	In-line	BS VI	Front - Trai	Injection	28	Petrol	1490	3731	1579	Hatchback	5	25.17	
16	Renault	Kwid Rxl 0.8		383290	799	3	4	FWD	In-line	BS VI	Front - Trai	Injection	28	Petrol	1490	3731	1579	Hatchback	5	25.17	
17	Renault	Kwid Rxt 0.8		413290	799	3	4	FWD	In-line	BS VI	Front - Trai	Injection	28	Petrol	1490	3731	1580	Hatchback	5	25.17	
18	Renault	Kwid Rxt 1.0		433290	999	3	4	FWD	In-line	BS VI	Front - Trai	Injection	28	Petrol	1490	3731	1579	Hatchback	5	23.01	
19	Renault	Kwid Climber 1.		454490	999	3	4	FWD	In-line	BS VI	Front - Trai	Injection	28	Petrol	1490	3731	1579	Hatchback	5	23.01	
20	Renault	Kwid Rxt Amt 1.		463290	999	3	4	FWD	In-line	BS VI	Front - Trai	Injection	28	Petrol	1490	3731	1579	Hatchback	5	24.04	
21	Renault	Kwid Climber A		484490	999	3	4	FWD	In-line	BS VI	Front - Trai	Injection	28	Petrol	1490	3731	1579	Hatchback	5	24.04	
22	Renault	Kwid Rxt (O) 1.0		440990	999	3	4	FWD	In-line	BS VI	Front - Trai	Injection	28	Petrol	1490	3731	1579	Hatchback	5	23.01	
23	Renault	Kwid Rxt (O) An		470990	999	3	4	FWD	In-line	BS VI	Front - Trai	Injection	28	Petrol	1490	3731	1579	Hatchback	5	23.01	
24	Renault	Kwid Climber (C		462190	999	3	4	FWD	In-line	BS VI	Front - Trai	Injection	28	Petrol	1490	3731	1579	Hatchback	5	23.01	
25	Renault	Kwid Climber (C		492190	999	3	4	FWD	In-line	BS VI	Front - Trai	Injection	28	Petrol	1490	3731	1579	Hatchback	5	24.04	

## Data Statistics Performed

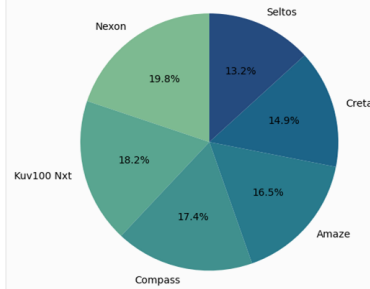
1. Descriptive Analysis
2. Top Car Models
3. Cheapest Car Models
4. Popular Fuel Types
5. Seating Capacity Insights
6. Fuel Efficiency Analysis
7. Correlation Analysis
8. Outliers Detection
9. Average Price by Make
10. Price Segmentation
11. Model manufactured by Each Maker
12. Feature-Rich Cars
13. Cars with Less Features



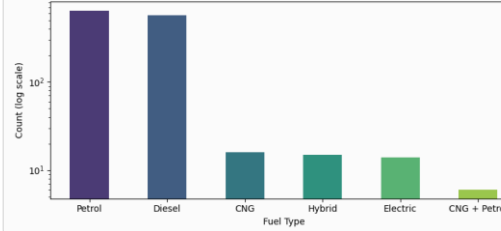
Distribution of Top 6 Car Makes



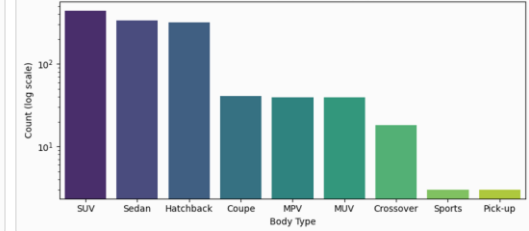
Distribution of Top 6 Market Dominating Car Models



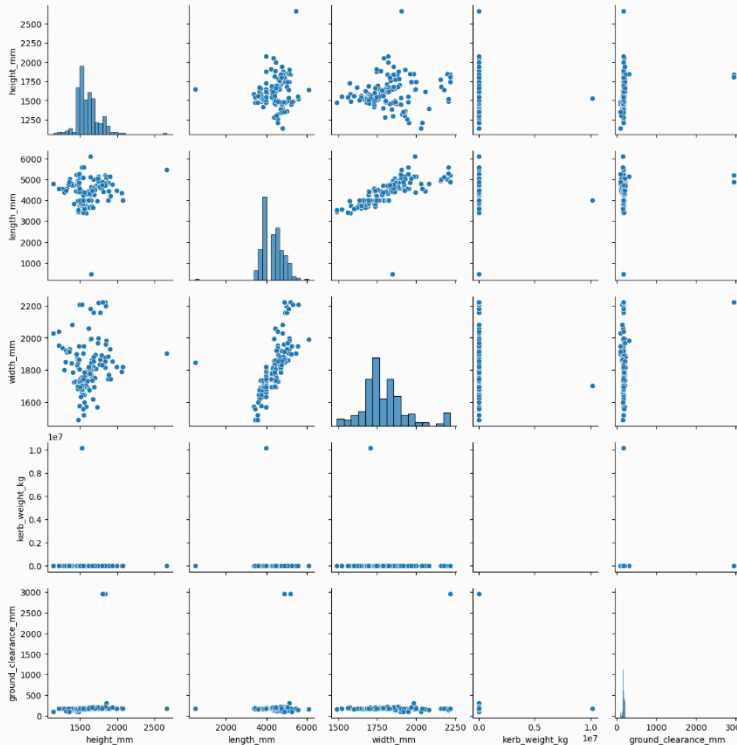
Count of Cars by Fuel Type



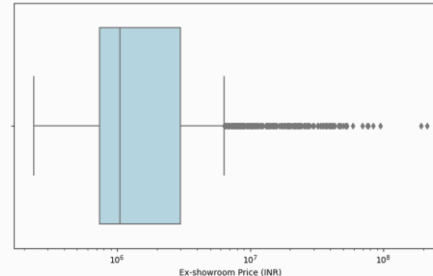
Count of Cars by Desired Body Types



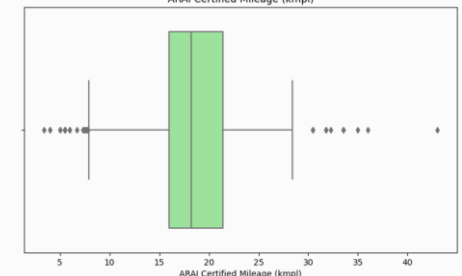
Pairplot of Selected Numeric Variables (Subsampled Data)



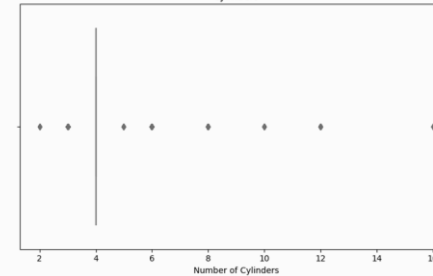
Ex-showroom Prices



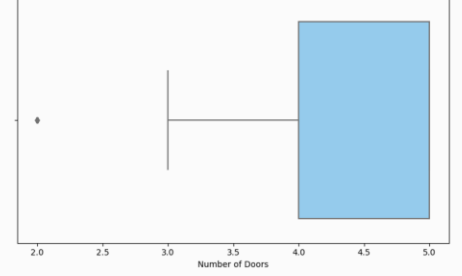
ARAI Certified Mileage (kmpl)



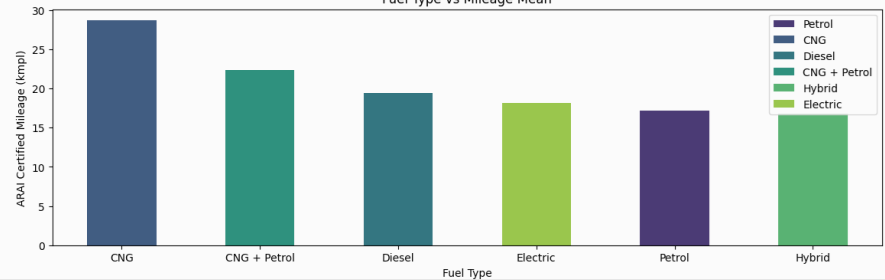
Cylinders



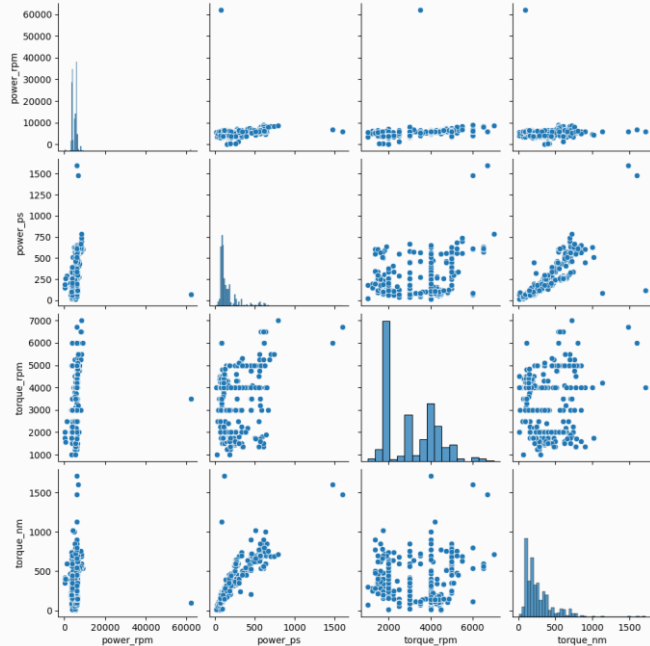
Doors



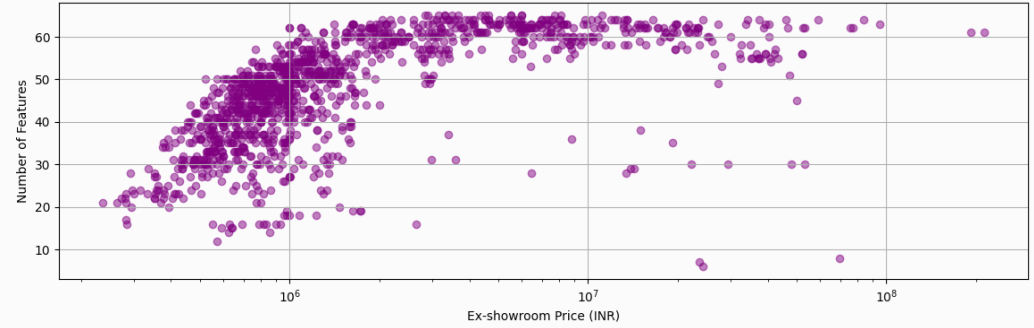
Fuel Type vs Mileage Mean



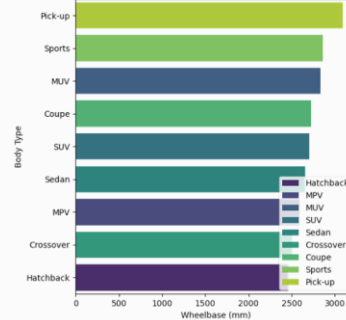
Pairplot of Power and Torque Variables



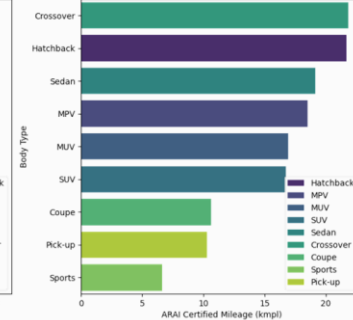
Ex-showroom Price vs. Number of Features



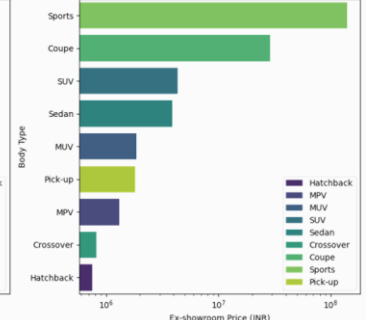
Wheel Size vs Body Type



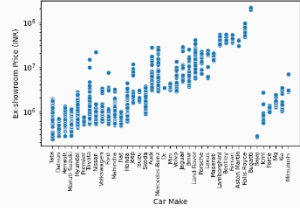
Body Type vs ARAI Certified Mileage Mean



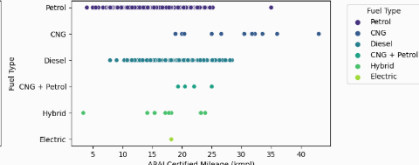
Body Type vs Ex-showroom Price Mean



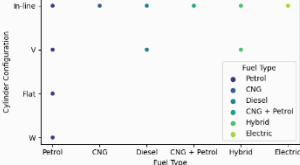
Car Make vs Ex-showroom Price



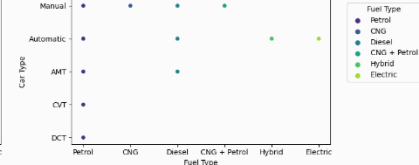
ARAI Certified Mileage vs Fuel Type



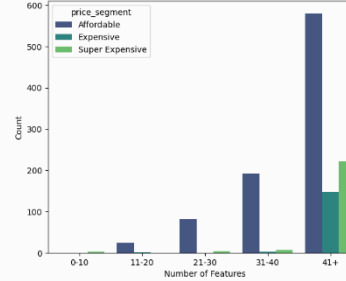
Fuel Type vs Cylinder Configuration



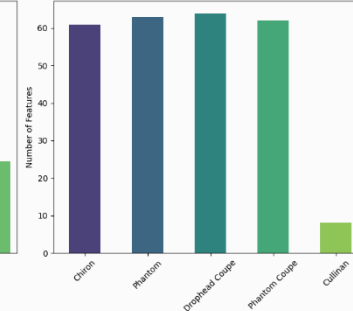
Fuel Type vs Car Type



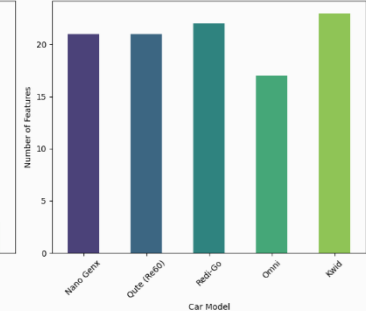
Number of Features vs Price Segment



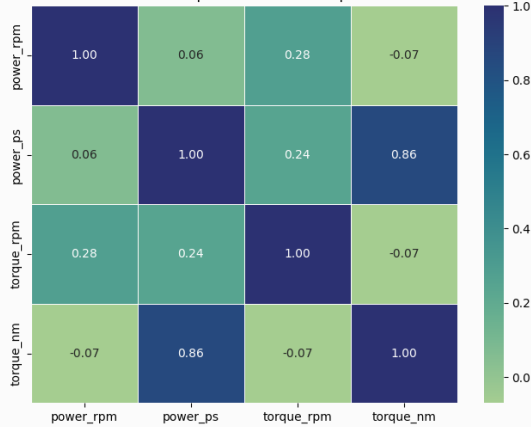
Top 5 Expensive Car Models vs Number of Features



Top 5 Cheapest Car Models vs Number of Features



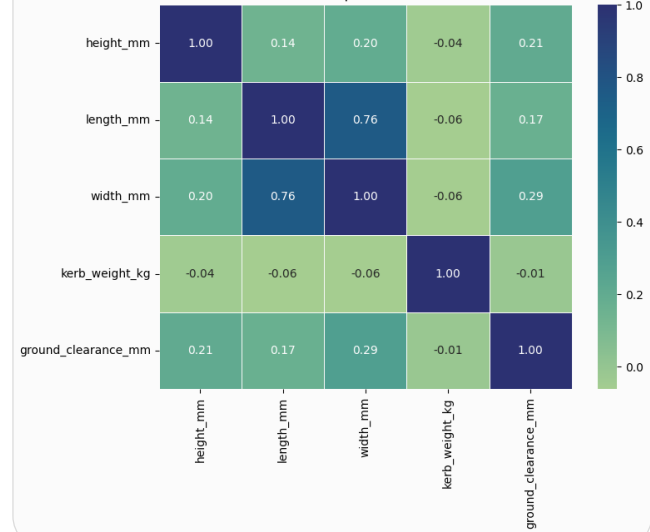
Correlation Heatmap for Power and Torque Variables



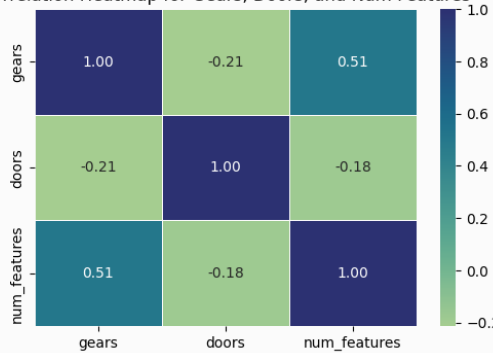
Correlation Heatmap for Tire-related Variables



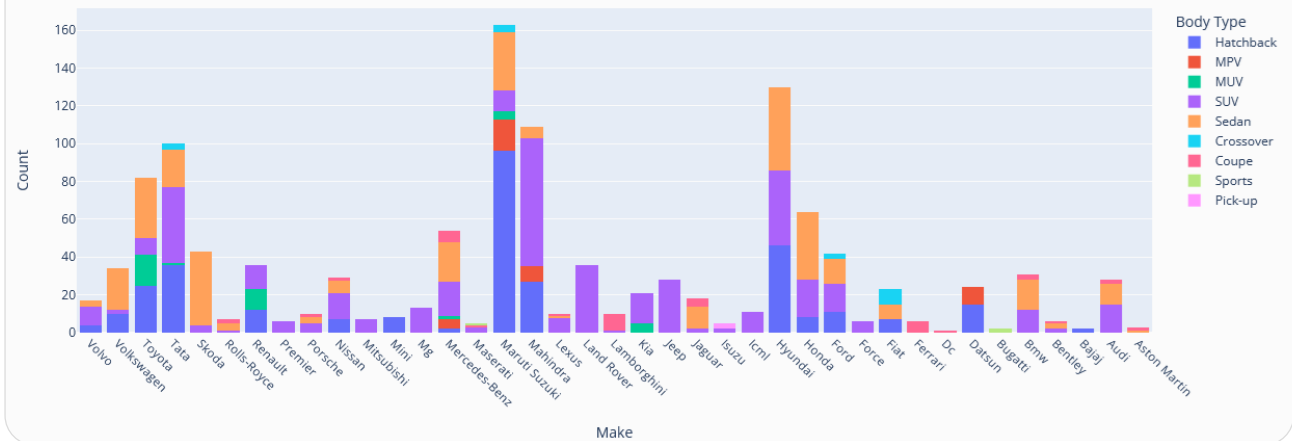
Correlation Heatmap for Dimension Variables



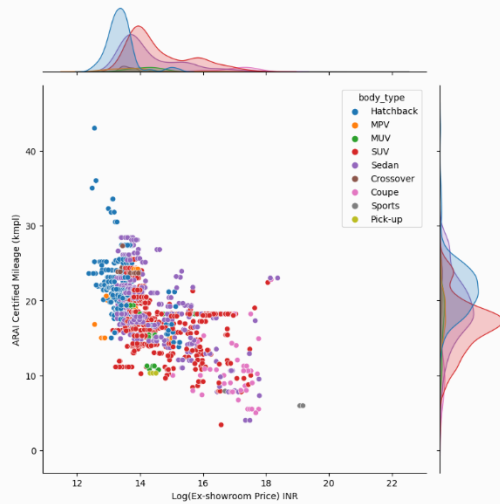
Correlation Heatmap for Gears, Doors, and Num Features



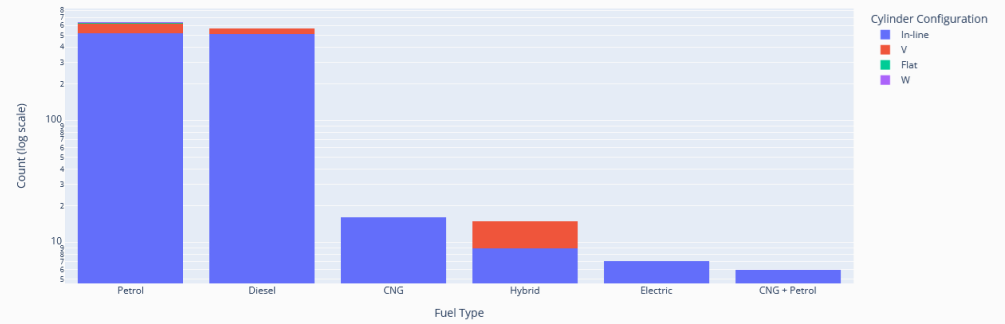
Make Distribution by Desired Body Types



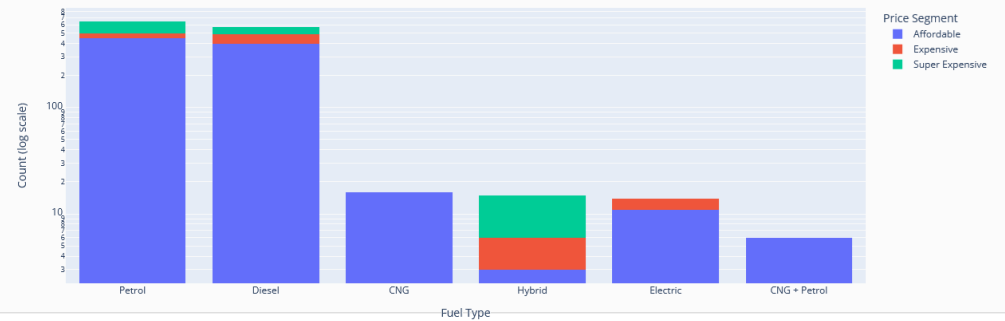
Joint Plot for Log(Price) vs Mileage vs Body Type



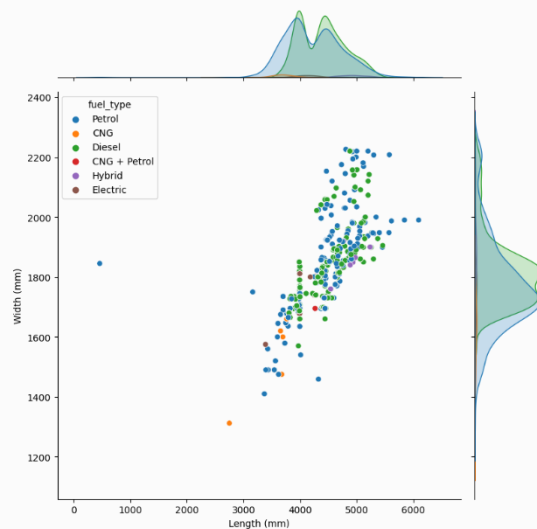
Fuel Type Distribution by Cylinder Configuration



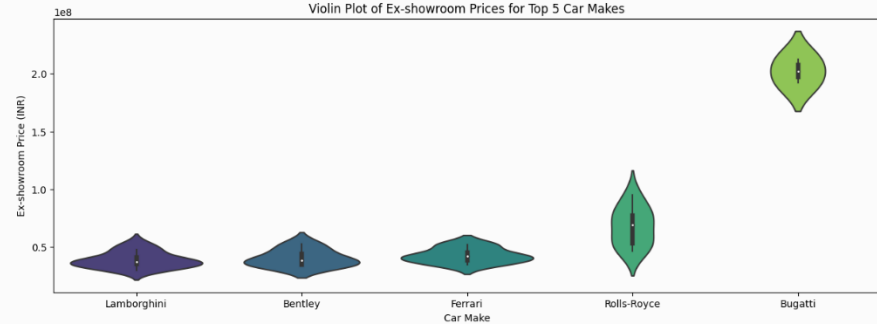
Price Segment Distribution by Fuel Type



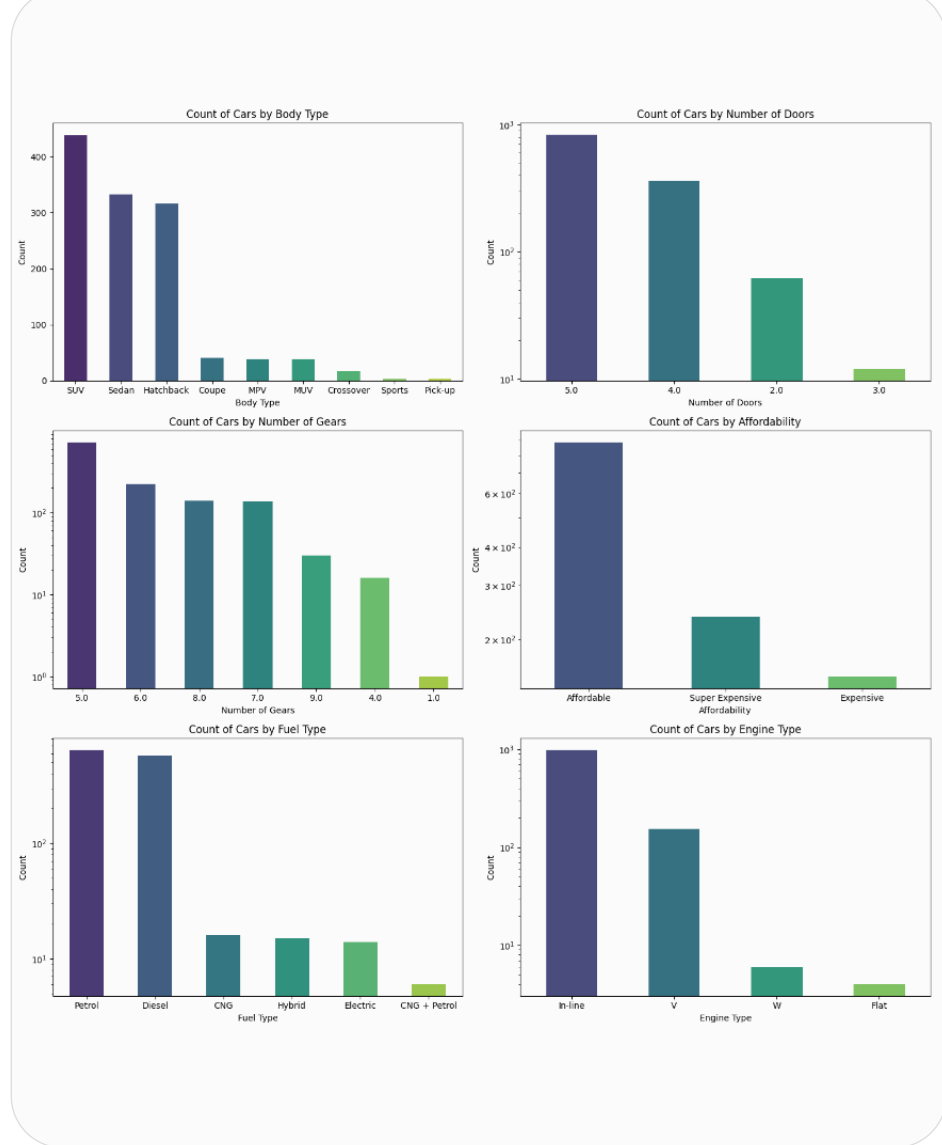
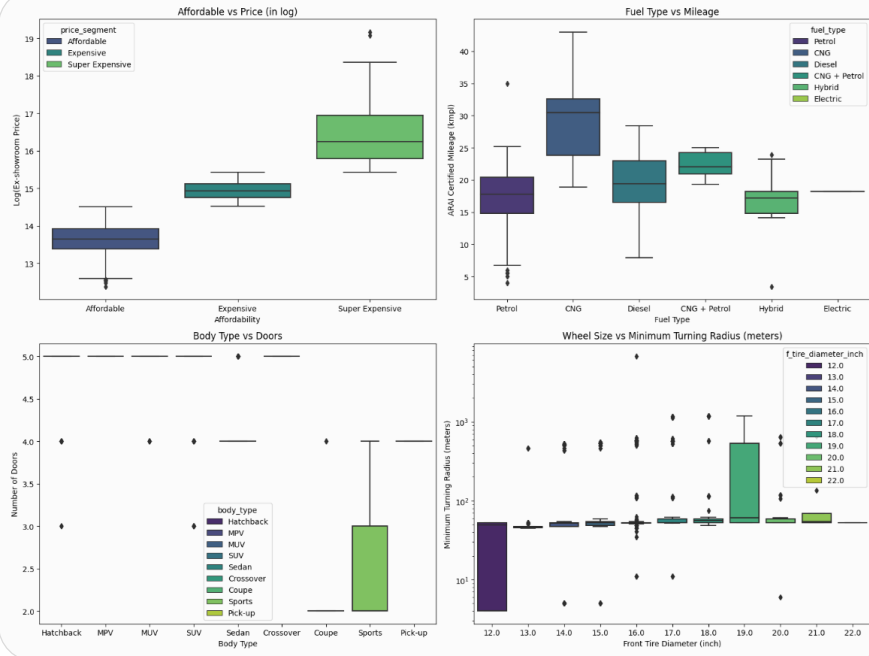
Joint Plot for Length vs Width vs Fuel Type



Violin Plot of Ex-showroom Prices for Top 5 Car Makes







Week 6

# Superstore Sales EDA



# Data Processing

## Uncleaned

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer	Customer Segment	Country	City	State	Postal Code	Region	Product ID	Category	Sub-Category	Product Name	Sales			
2		1	CA-2017-1	8/11/2017	11/11/2017	Second CI	CG-12520	Claire Gut	Consumer	United Sts	Henderson	Kentucky	42420	South	FUR-BO-1f	Furniture	Bookcases	Bush Som	261.96	
3		2	CA-2017-1	8/11/2017	11/11/2017	Second CI	CG-12520	Claire Gut	Consumer	United Sts	Henderson	Kentucky	42420	South	FUR-CH-1f	Furniture	Chairs	Hon Delux	731.94	
4		3	CA-2017-1	12/6/2017	16/06/2017	Second CI	DV-13045	Darrin Var	Corporate	United Sts	Los Angeli	California	90036	West	OFF-LA-1c	Office Sup	Labels	Self-Adhe	14.62	
5		4	US-2016-1	11/10/2016	18/10/2016	Standard	ISO-20335	Sean O'Dc	Consumer	United Sts	Fort Laude	Florida	33311	South	FUR-TA-1c	Furniture	Tables	Bretford C	957.5775	
6		5	US-2016-1	11/10/2016	18/10/2016	Standard	ISO-20335	Sean O'Dc	Consumer	United Sts	Fort Laude	Florida	33311	South	OFF-ST-10	Office Sup	Storage	Eldon Folc	22.368	
7		6	CA-2015-1	9/6/2015	14/06/2015	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	FUR-FU-1c	Furniture	Furnishing	Eldon Exp	48.86	
8		7	CA-2015-1	9/6/2015	14/06/2015	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	OFF-AR-1f	Office Sup	Art	Newell 32	7.28	
9		8	CA-2015-1	9/6/2015	14/06/2015	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	TEC-PH-1c	Technolog	Phones	Mitel 532c	907.152	
10		9	CA-2015-1	9/6/2015	14/06/2015	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	OFF-BI-10	Office Sup	Binders	DXL Angle	18.504	
11		10	CA-2015-1	9/6/2015	14/06/2015	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	OFF-AP-1f	Office Sup	Appliance	Belkin F5c	114.9	
12		11	CA-2015-1	9/6/2015	14/06/2015	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	FUR-TA-1c	Furniture	Tables	Chromcra	1706.184	
13		12	CA-2015-1	9/6/2015	14/06/2015	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	TEC-PH-1c	Technolog	Phones	Konftel 25	911.424	
14		13	CA-2018-1	15/04/2018	20/04/2018	Standard	AA-10480	Andrew A	Consumer	United Sts	Concord	North Cari	28027	South	OFF-PA-1f	Office Sup	Paper	Xerox 196	15.552	
15		14	CA-2017-1	5/12/2017	10/12/2017	Standard	IM-15070	Irene Mac	Consumer	United Sts	Seattle	Washingt	98103	West	OFF-BI-10	Office Sup	Binders	Fellowes I	407.976	
16		15	US-2016-1	12/21/2016	26/11/2016	Standard	HP-14815	Harold Pa	Home Off	United Sts	Fort Wortl	Texas	76106	Central	OFF-AP-1f	Office Sup	Appliance	Holmes Ri	68.81	
17		16	US-2016-1	12/21/2016	26/11/2016	Standard	HP-14815	Harold Pa	Home Off	United Sts	Fort Wortl	Texas	76106	Central	OFF-BI-10	Office Sup	Binders	Storex Du	2.544	
18		17	CA-2015-1	11/11/2015	18/11/2015	Standard	PK-19075	Pete Kriz	Consumer	United Sts	Madison	Wisconsin	53711	Central	OFF-ST-10	Office Sup	Storage	Stur-D-Stc	665.88	
19		18	CA-2015-1	113/05/2015	15/05/2015	Second CI	AG-10270	Alejandro	Consumer	United Sts	West Jord	Utah	84084	West	OFF-ST-10	Office Sup	Storage	Fellowes I	55.5	
20		19	CA-2015-1	127/08/2015	1/9/2015	Second CI	ZD-21925	Zuschuss I	Consumer	United Sts	San Franci	California	94109	West	OFF-AR-1f	Office Sup	Art	Newell 34	8.56	
21		20	CA-2015-1	127/08/2015	1/9/2015	Second CI	ZD-21925	Zuschuss I	Consumer	United Sts	San Franci	California	94109	West	TEC-PH-1c	Technolog	Phones	Cisco SPA	213.48	
22		21	CA-2015-1	127/08/2015	1/9/2015	Second CI	ZD-21925	Zuschuss I	Consumer	United Sts	San Franci	California	94109	West	OFF-BI-10	Office Sup	Binders	Wilson Joi	22.72	
23		22	CA-2017-1	9/12/2017	13/12/2017	Standard	KB-16585	Ken Black	Corporate	United Sts	Fremont	Nebraska	68025	Central	OFF-AR-1f	Office Sup	Art	Newell 31	19.46	
24		23	CA-2017-1	9/12/2017	13/12/2017	Standard	KB-16585	Ken Black	Corporate	United Sts	Fremont	Nebraska	68025	Central	OFF-AP-1f	Office Sup	Appliance	Acco Six-c	60.34	
25		24	US-2018-1	16/07/2018	18/07/2018	Second CI	SF-20065	Sandra Fla	Consumer	United Sts	Philadelpl	Pennsylva	19140	East	FUR-CH-1f	Furniture	Chairs	Global De	71.372	

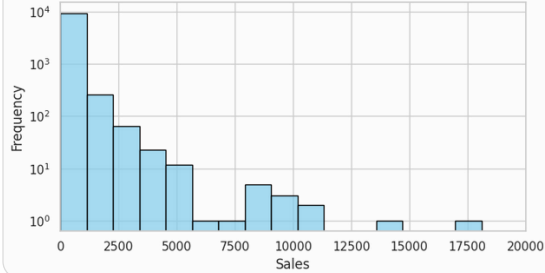
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
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2	CA-2017-1	11/8/2017	11/11/2017	3	Second CI	CG-12520	Claire Gut	Consumer	United Sts	Henderson	Kentucky	42420	South	FUR-BO-1f	Furniture	Bookcases	Bush Som	261.96		
3	CA-2017-1	11/8/2017	11/11/2017	3	Second CI	CG-12520	Claire Gut	Consumer	United Sts	Henderson	Kentucky	42420	South	FUR-CH-1f	Furniture	Chairs	Hon Delux	731.94		
4	CA-2017-1	6/12/2017	6/16/2017	4	Second CI	DV-13045	Darrin Var	Corporate	United Sts	Los Angeli	California	90036	West	OFF-LA-1c	Office Sup	Labels	Self-Adhe	14.62		
5	US-2016-1	10/11/2016	10/18/2016	7	Standard	ISO-20335	Sean O'Dc	Consumer	United Sts	Fort Laude	Florida	33311	South	FUR-TA-1c	Furniture	Tables	Bretford C	957.5775		
6	US-2016-1	10/11/2016	10/18/2016	7	Standard	ISO-20335	Sean O'Dc	Consumer	United Sts	Fort Laude	Florida	33311	South	OFF-ST-10	Office Sup	Storage	Eldon Folc	22.368		
7	CA-2015-1	6/9/2015	6/14/2015	5	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	FUR-FU-1c	Furniture	Furnishing	Eldon Exp	48.86		
8	CA-2015-1	6/9/2015	6/14/2015	5	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	OFF-AR-1f	Office Sup	Art	Newell 32	7.28		
9	CA-2015-1	6/9/2015	6/14/2015	5	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	TEC-PH-1c	Technolog	Phones	Mitel 532c	907.152		
10	CA-2015-1	6/9/2015	6/14/2015	5	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	OFF-BI-10	Office Sup	Binders	DXL Angle	18.504		
11	CA-2015-1	6/9/2015	6/14/2015	5	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	OFF-AP-1f	Office Sup	Appliance	Belkin F5c	114.9		
12	CA-2015-1	6/9/2015	6/14/2015	5	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	FUR-TA-1c	Furniture	Tables	Chromcra	1706.184		
13	CA-2015-1	6/9/2015	6/14/2015	5	Standard	BH-11710	Brosina Hc	Consumer	United Sts	Los Angeli	California	90032	West	TEC-PH-1c	Technolog	Phones	Konftel 25	911.424		
14	CA-2018-1	4/15/2018	4/20/2018	5	Standard	AA-10480	Andrew A	Consumer	United Sts	Concord	North Cari	28027	South	OFF-PA-1f	Office Sup	Paper	Xerox 196	15.552		
15	CA-2017-1	12/5/2017	12/10/2017	5	Standard	IM-15070	Irene Mac	Consumer	United Sts	Seattle	Washingt	98103	West	OFF-BI-10	Office Sup	Binders	Fellowes I	407.976		
16	US-2016-1	11/22/2016	11/26/2016	4	Standard	HP-14815	Harold Pa	Home Off	United Sts	Fort Wortl	Texas	76106	Central	OFF-AP-1f	Office Sup	Appliance	Holmes Ri	68.81		
17	US-2016-1	11/22/2016	11/26/2016	4	Standard	HP-14815	Harold Pa	Home Off	United Sts	Fort Wortl	Texas	76106	Central	OFF-BI-10	Office Sup	Binders	Storex Du	2.544		
18	CA-2015-1	11/11/2015	11/18/2015	7	Standard	PK-19075	Pete Kriz	Consumer	United Sts	Madison	Wisconsin	53711	Central	OFF-ST-10	Office Sup	Storage	Stur-D-Stc	665.88		
19	CA-2015-1	5/13/2015	5/15/2015	2	Second CI	AG-10270	Alejandro	Consumer	United Sts	West Jord	Utah	84084	West	OFF-ST-10	Office Sup	Storage	Fellowes I	55.5		
20	CA-2015-1	8/27/2015	9/1/2015	5	Second CI	ZD-21925	Zuschuss I	Consumer	United Sts	San Franci	California	94109	West	OFF-AR-1f	Office Sup	Art	Newell 34	8.56		
21	CA-2015-1	8/27/2015	9/1/2015	5	Second CI	ZD-21925	Zuschuss I	Consumer	United Sts	San Franci	California	94109	West	TEC-PH-1c	Technolog	Phones	Cisco SPA	213.48		
22	CA-2015-1	8/27/2015	9/1/2015	5	Second CI	ZD-21925	Zuschuss I	Consumer	United Sts	San Franci	California	94109	West	OFF-BI-10	Office Sup	Binders	Wilson Joi	22.72		
23	CA-2017-1	12/9/2017	12/13/2017	4	Standard	KB-16585	Ken Black	Corporate	United Sts	Fremont	Nebraska	68025	Central	OFF-AR-1f	Office Sup	Art	Newell 31	19.46		
24	CA-2017-1	12/9/2017	12/13/2017	4	Standard	KB-16585	Ken Black	Corporate	United Sts	Fremont	Nebraska	68025	Central	OFF-AP-1f	Office Sup	Appliance	Acco Six-c	60.34		
25	US-2018-1	7/16/2018	7/18/2018	2	Second CI	SF-20065	Sandra Fla	Consumer	United Sts	Philadelpl	Pennsylva	19140	East	FUR-CH-1f	Furniture	Chairs	Global De	71.372		

## Data Statistics Performed

1. Descriptive Analysis
2. Top Customers
3. Popular Products
4. Customer Segmentation
5. Temporal Trends
6. Geographical Analysis
7. Shipping Analysis
8. Correlation Analysis
9. Outliers Detection
10. Average Sales by Category

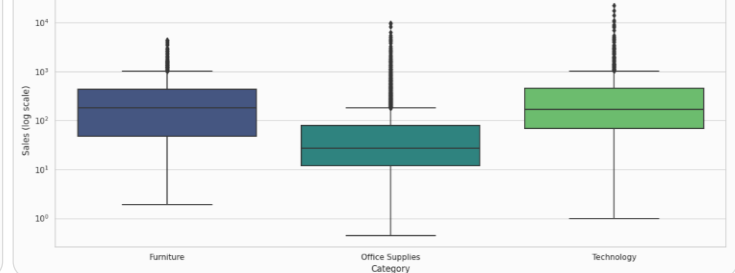
Distribution of Sales



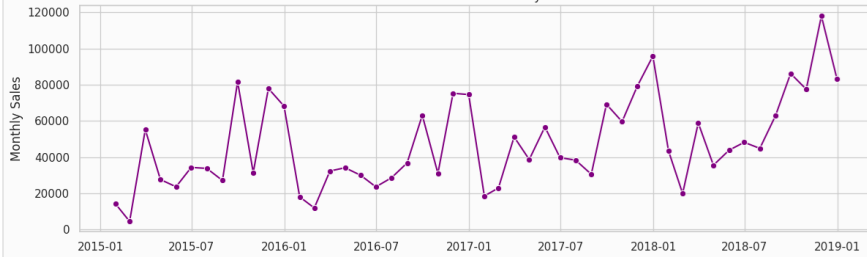
Distribution of Days to Ship



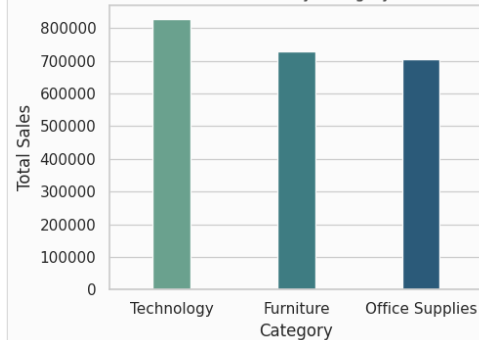
Box Plot of Sales by Category



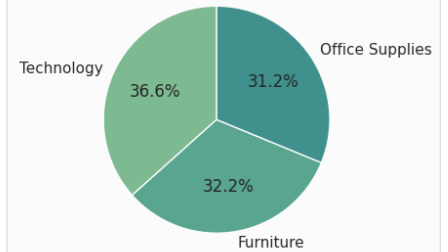
Time Series Plot of Monthly Sales



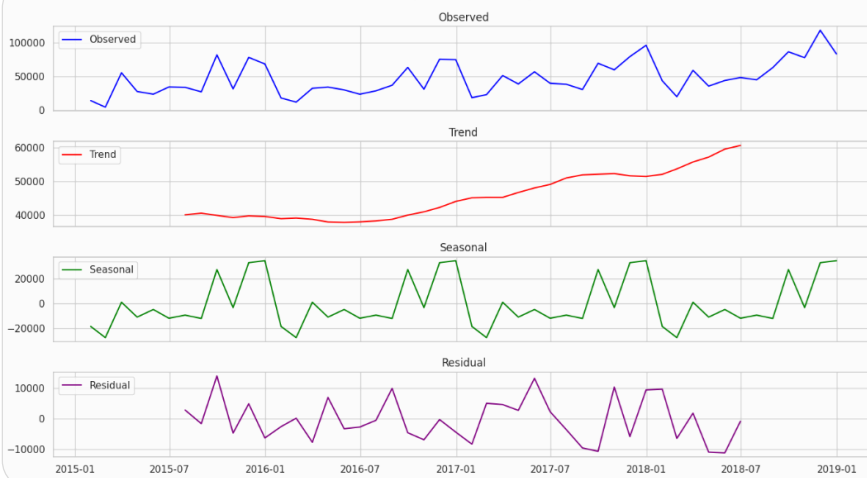
Total Sales by Category



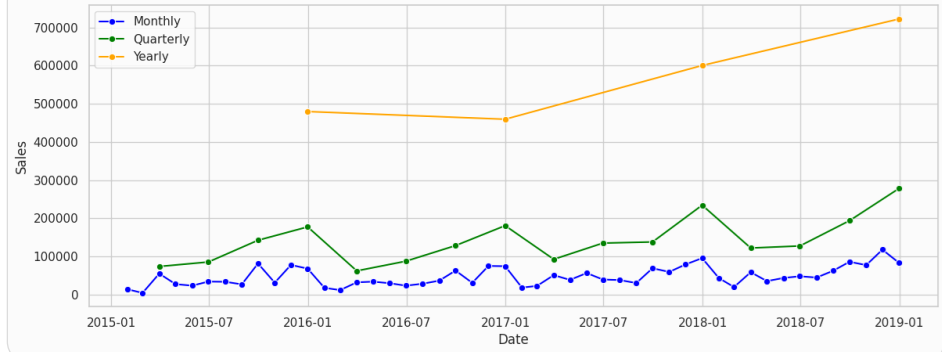
Total Sales by Category

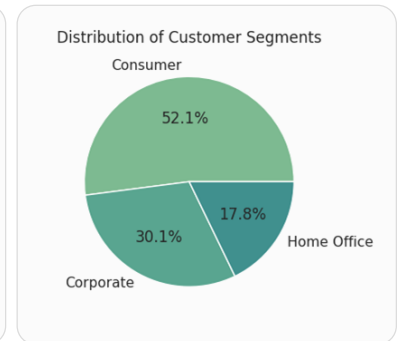
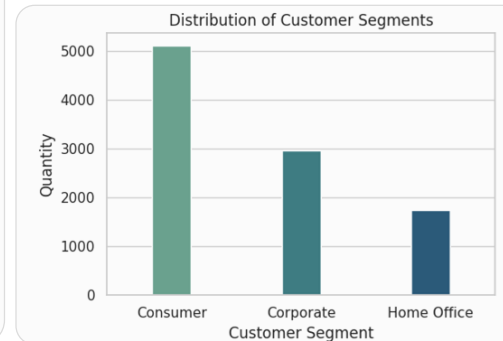
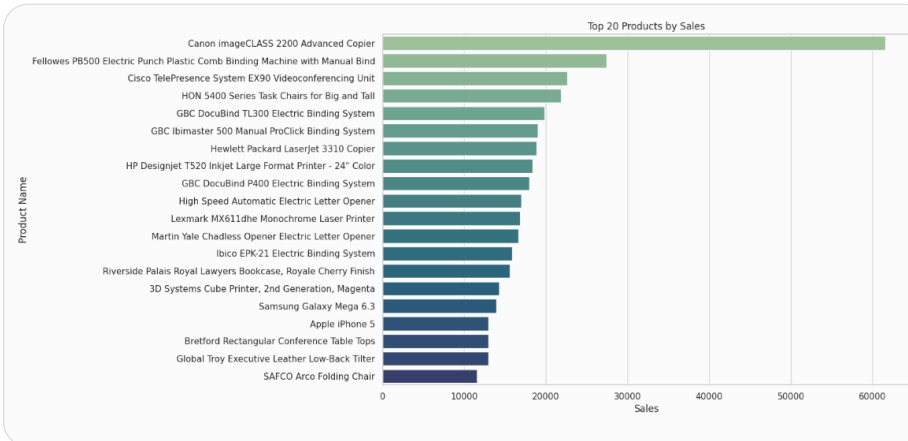
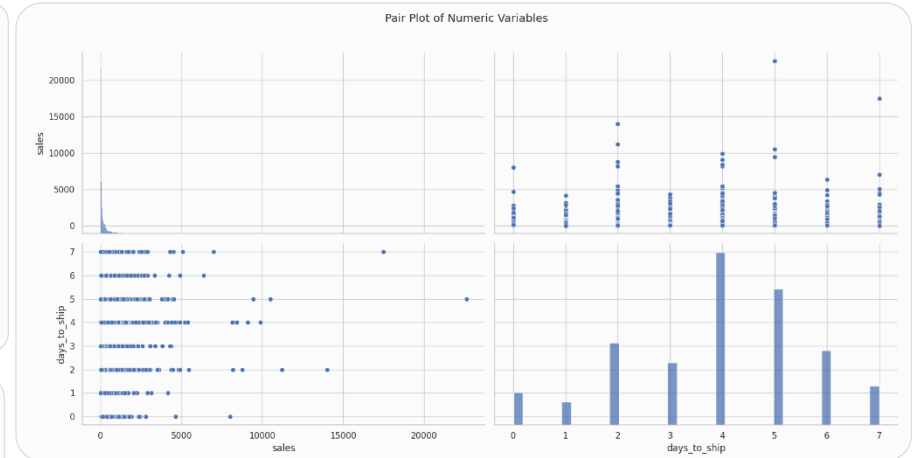
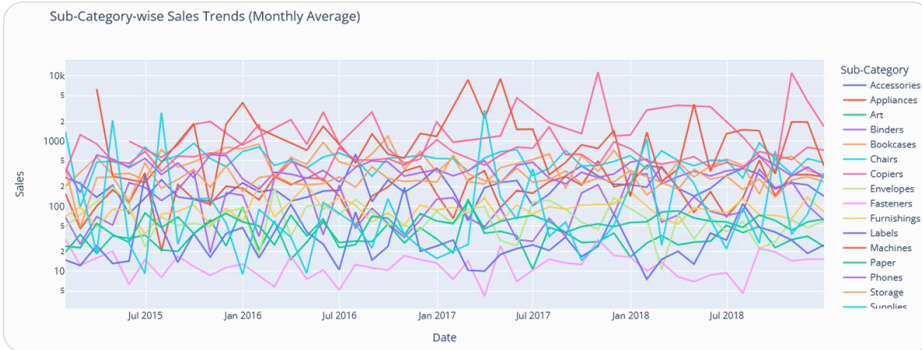
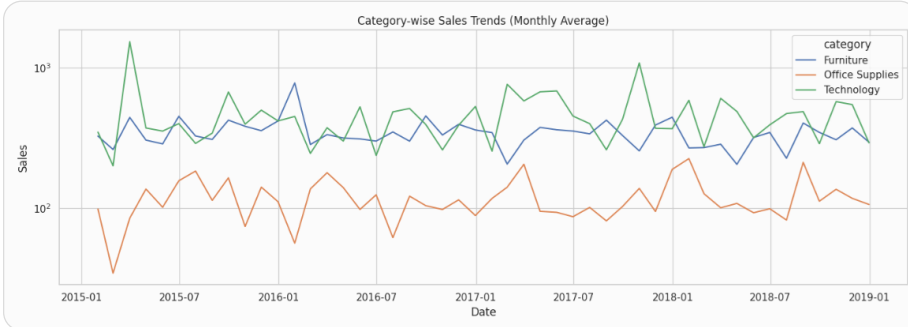


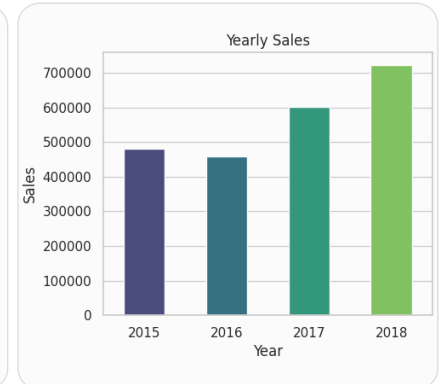
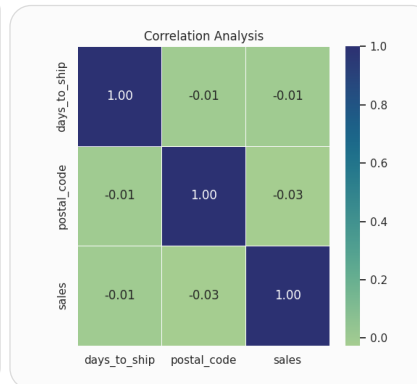
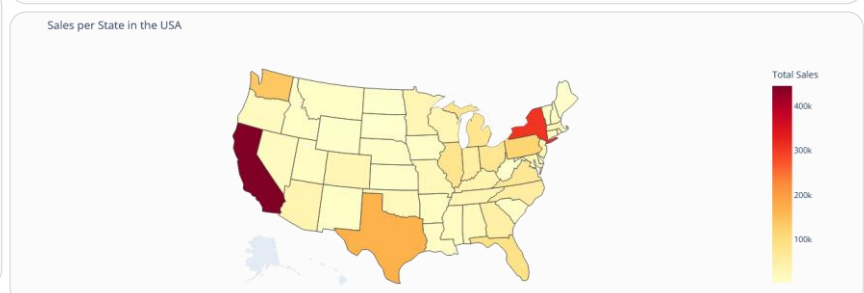
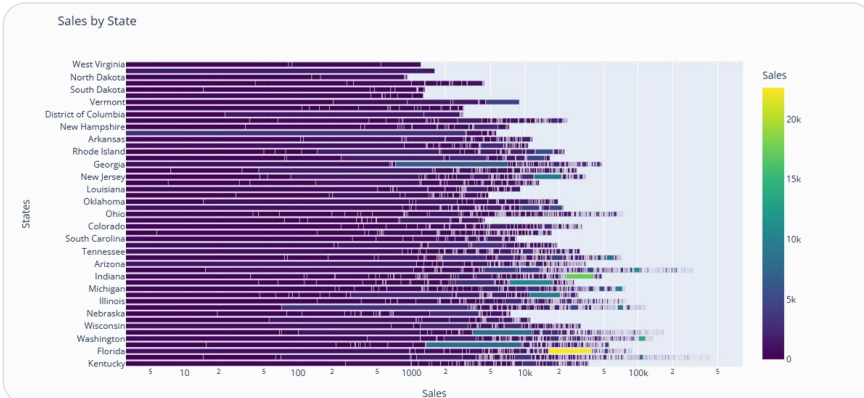
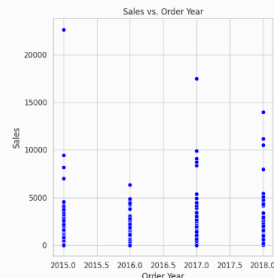
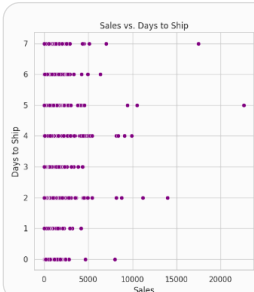
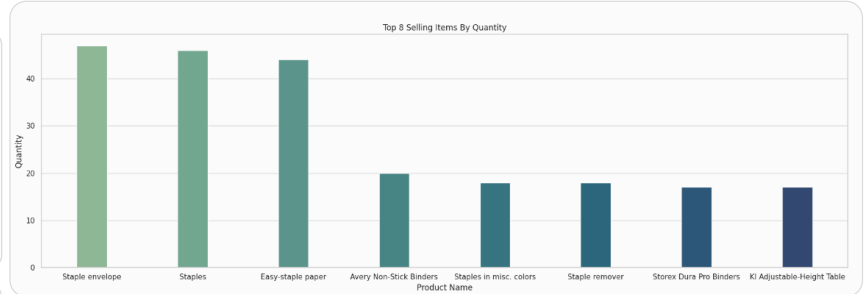
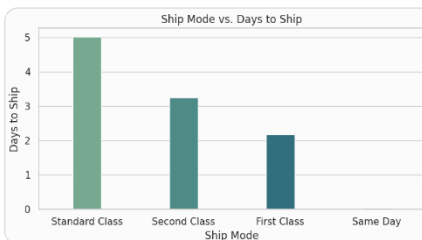
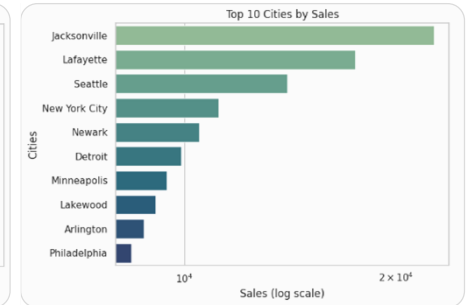
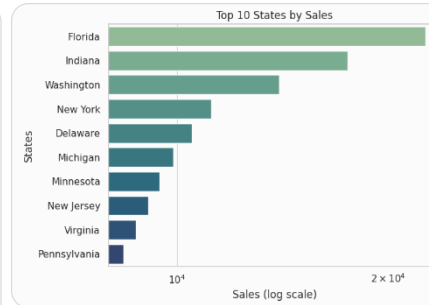
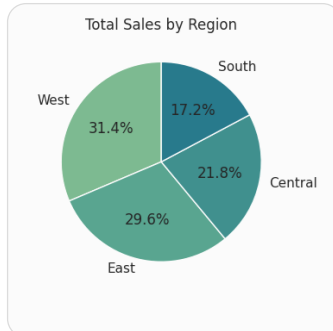
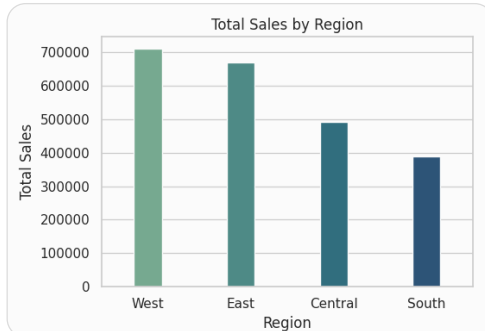
Seasonal Decomposition of Monthly Sales



Sales Variation Over Time







Thank You  
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**Winter Internship**  
By Arijit Dhali