

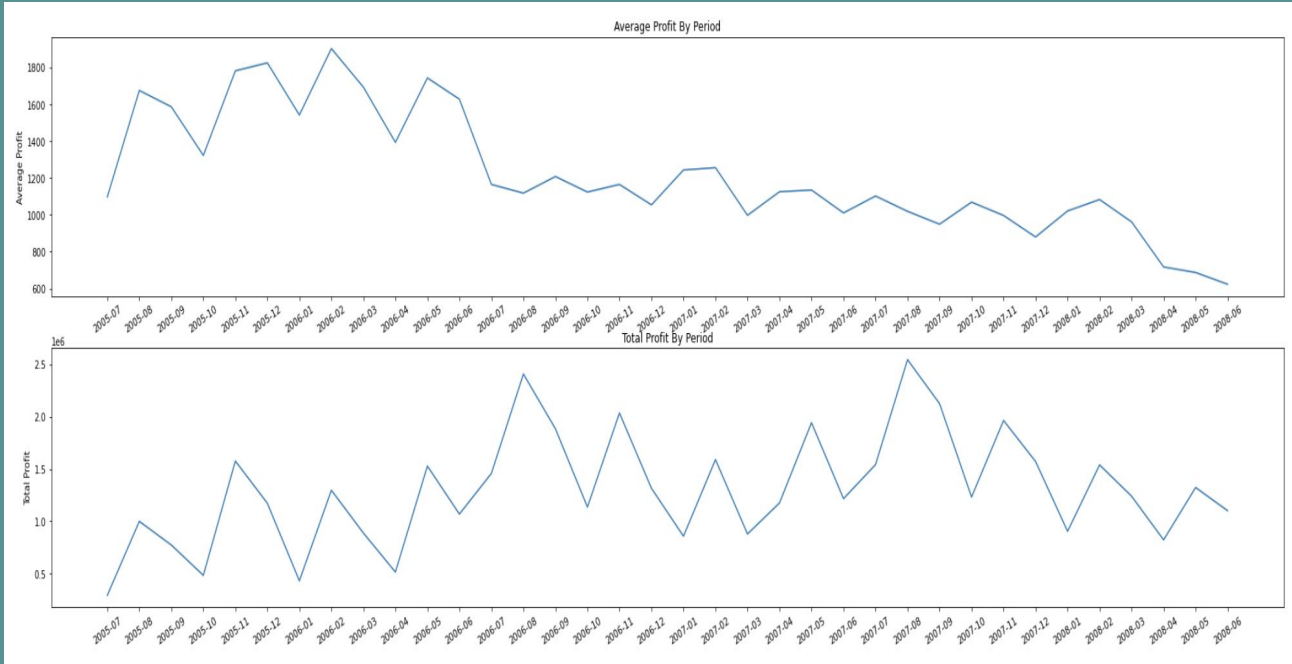
Adventure Works Cycles

Profit analysis

- Gayatri Kanala

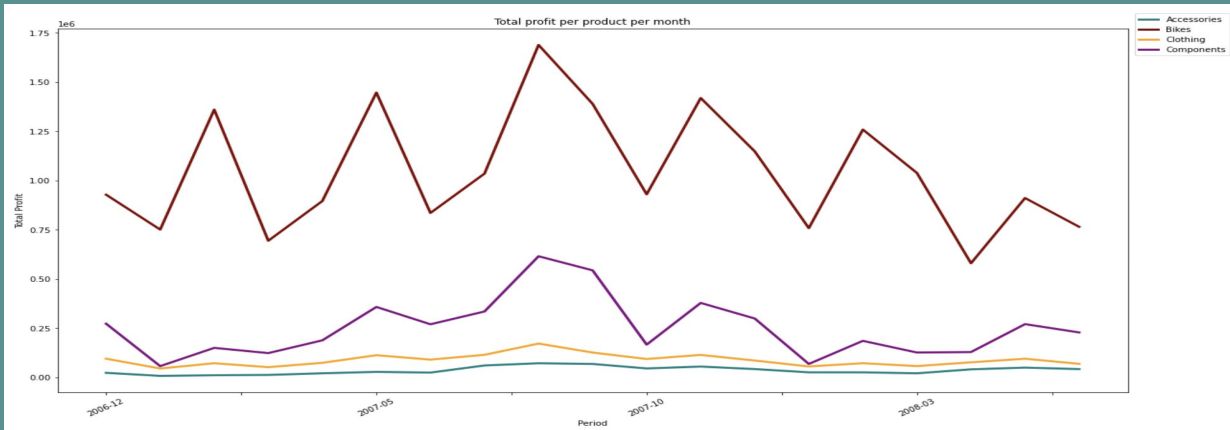


Overall Profit analysis & observations

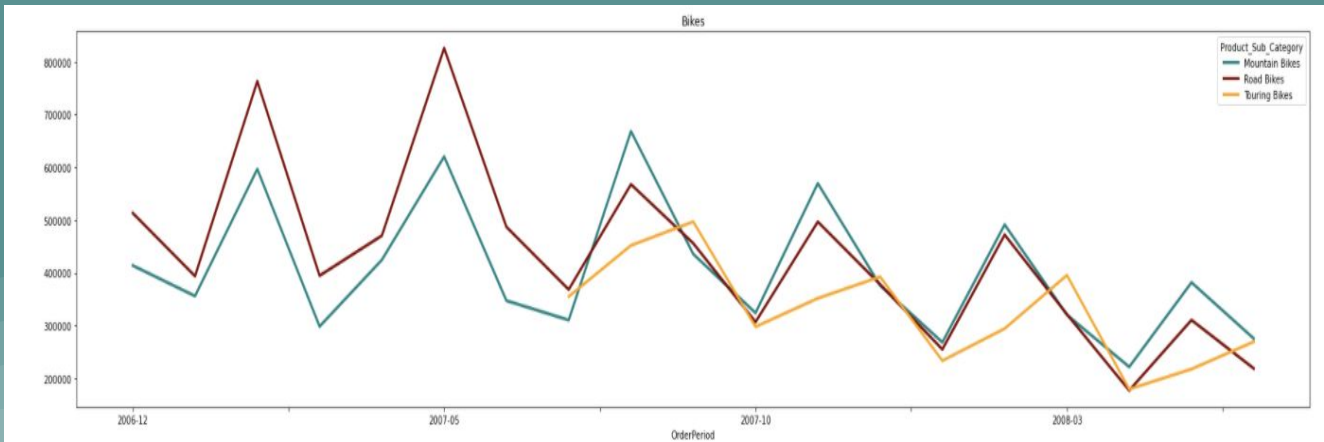


- The average profit has been good till 2006-07.
- Decline in average profit starts from approx 2006-12, however the total profit made in 2007-08 is good, but from then on the profit is declining.
- It's better to understand the profit analysis from 2006-12 onwards.

Product wise profit analysis

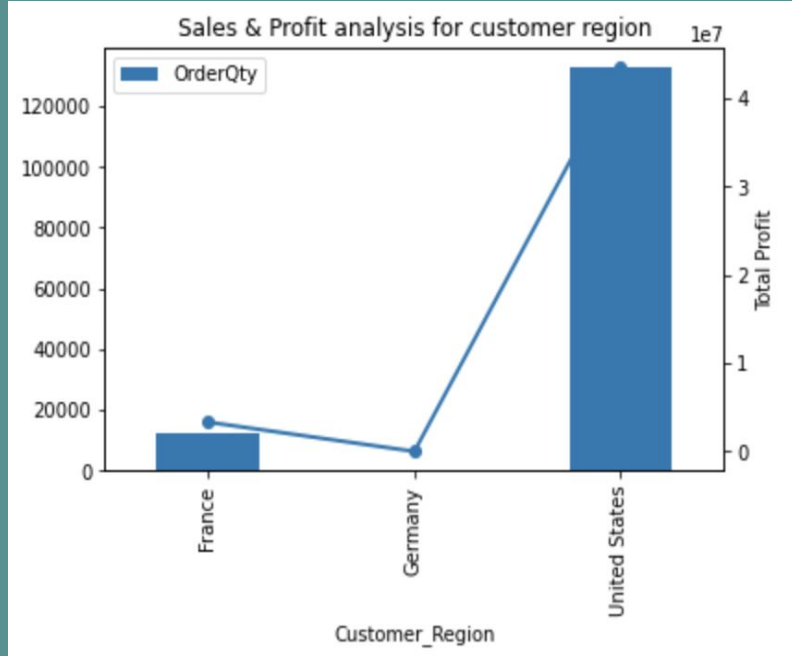


- Most profitable product - Bikes, but still the profit for Bikes has also been declining from the last few months.
- Bikes category has drastic drop in profit for it's subcategory - Mountain bikes and Road bikes.
- Least Profitable product - Accessories.



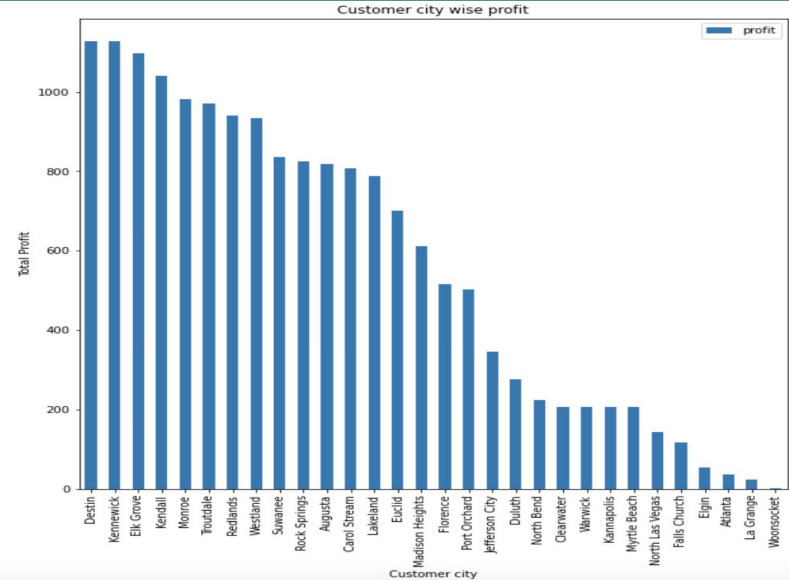
Mountain Bikes and Road bikes profit fall in recent months.

Region wise analysis



United States wins -
makes most profit
and sales overall.

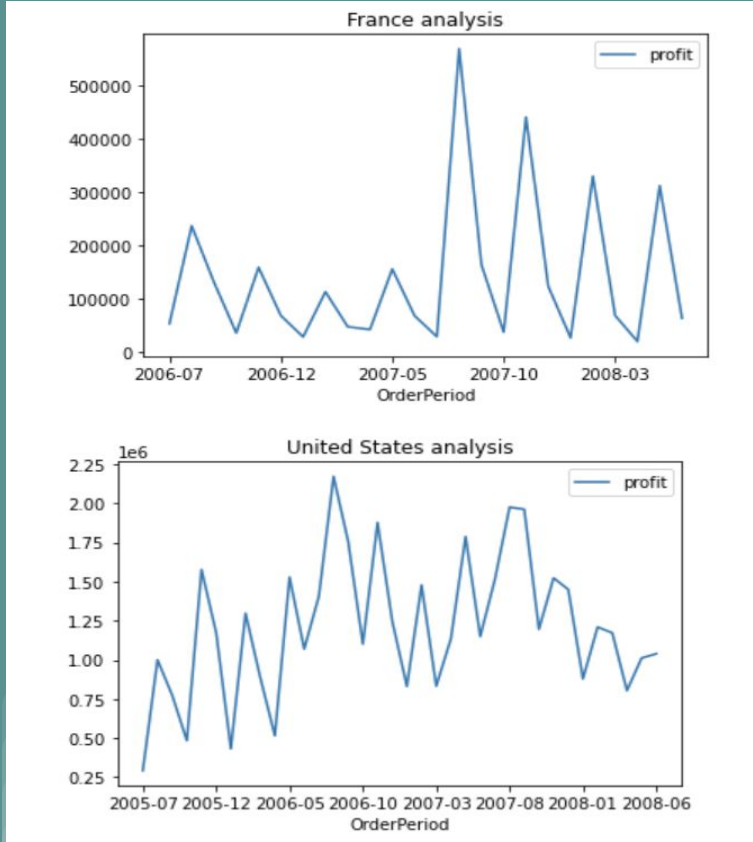
- Most profitable region in terms of sales and profit has always been United States.
- The below graph shows the least profitable cities from United States, and understanding more about these cities will help us make better decisions about marketing strategy.



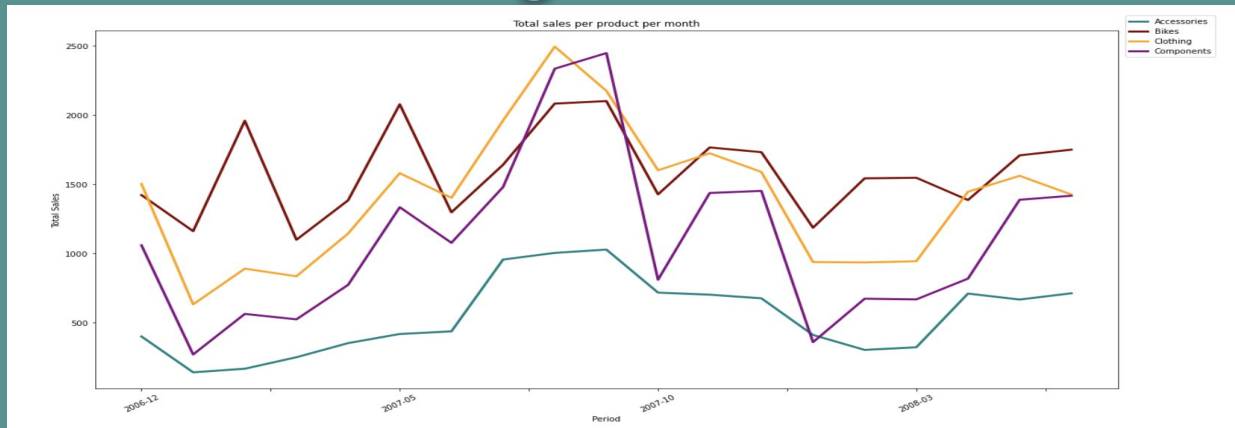
Does France has any impact on low profit in recent months ?

France doesn't impact the overall profit decline much, its United States region that impacts.

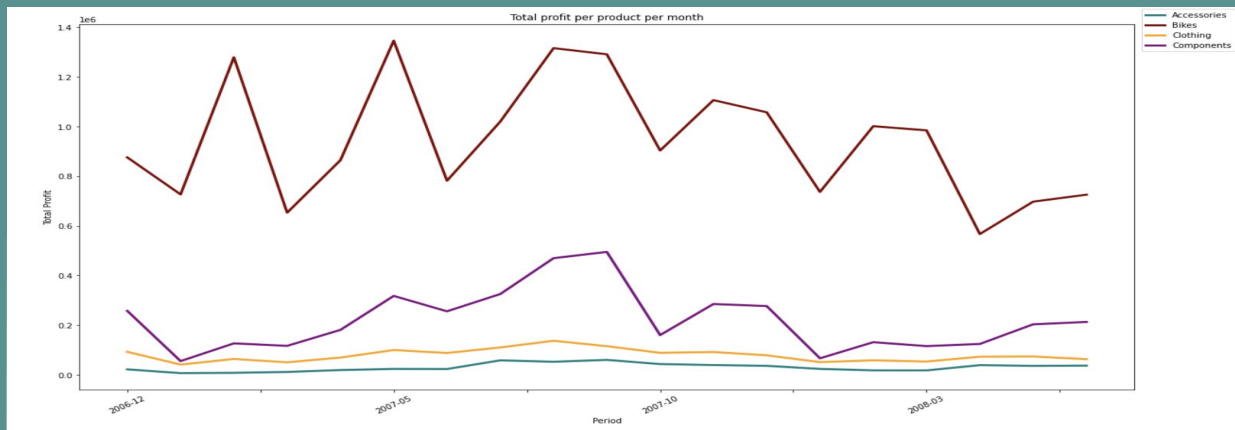
- The graph shows that France region was able to make more profit compared to the past, though there are fluctuations, but overall trend for France looks good.
- Definitely its United States region that is heavily impacting the overall profit as the profit decline trend which is observed overall is also seen in United States region.
- Hence to focus we should understand United States region specifically.



Does weather impact the sales in United States region ?



- Drastic drop in sales for all the products in 2007-12 and 2008-01. This can be because of extreme weather condition during that period which is normally cold and not suitable for bike rides. From 2008-03 again it starts to increase slowly.
- The same pattern is noticed in profit as well (2nd graph).



Data considered - United States region

Cities with products and sub products and their profit and sales

Invest less in Accessories - Tires and Tubes, Bottles and Cages, Clothing -Caps

Customer_City	Product_Category	Product_Sub_Category	OrderPeriod	profit	OrderQty
Newport News	Clothing	Caps	2007-07	12.132500	1
Edina	Clothing	Socks	2008-03	11.839800	2
Scottsdale	Components	Chains	2007-11	11.627800	1
San Diego	Accessories	Cleaners	2007-11	11.623600	1
Lynnwood	Accessories	Cleaners	2008-06	11.386675	1
San Diego	Accessories	Bottles and Cages	2008-05	11.224625	1
Lynnwood	Clothing	Caps	2007-12	10.757400	2
Kansas City	Clothing	Caps	2007-12	10.280600	1
Lynnwood	Accessories	Bottles and Cages	2008-06	9.810425	1
San Diego	Accessories	Bottles and Cages	2007-11	9.770600	1
Rocky Mount	Clothing	Caps	2007-11	9.694100	1
Redlands	Accessories	Bottles and Cages	2008-04	9.673575	3
Tigard	Clothing	Caps	2008-06	9.572125	1
Randolph	Accessories	Bottles and Cages	2007-11	9.564400	2
Peoria	Accessories	Bottles and Cages	2007-11	9.433600	2
San Diego	Clothing	Caps	2008-05	8.904625	1
Federal Way	Accessories	Tires and Tubes	2008-02	8.587500	1
Newport	Clothing	Caps	2007-05	8.226400	2
Culver City	Clothing	Jerseys	2008-06	7.861450	2
Lynnwood	Clothing	Caps	2008-06	7.490425	1
Cincinnati	Clothing	Caps	2007-05	7.218000	2
Indianapolis	Clothing	Socks	2007-08	6.112700	1
Virginia Beach	Accessories	Tires and Tubes	2007-08	5.207700	3
Newport News	Clothing	Jerseys	2008-04	5.205325	1
Cincinnati	Clothing	Caps	2008-05	4.858450	2
Redlands	Clothing	Caps	2008-04	4.522625	5
Peoria	Clothing	Caps	2008-05	3.629125	1
Alhambra	Accessories	Bottles and Cages	2008-06	3.544925	1
Logansport	Accessories	Tires and Tubes	2007-09	3.004400	2
Woonsocket	Accessories	Tires and Tubes	2007-08	1.467900	1

- The table shows the customer city, period, product and their sub product with total profit and total sales.
- This is a list of last 30 cities with least profit.
- Accessories with Tires and Tubes sub category, Bottles and Cages, Clothing with Caps sub category makes the least profit and sales also don't look that good.
- This is quite expected because may be not everyone will be interested in accessories and clothing compared to bikes.
- Business decision should be taken on how much to be invested in Accessories and Clothing compared to Bikes to make more profit
- And like seen earlier, these cities should in the table should be analysed - weather , population, geography understanding of the city.

Data considered - United States region

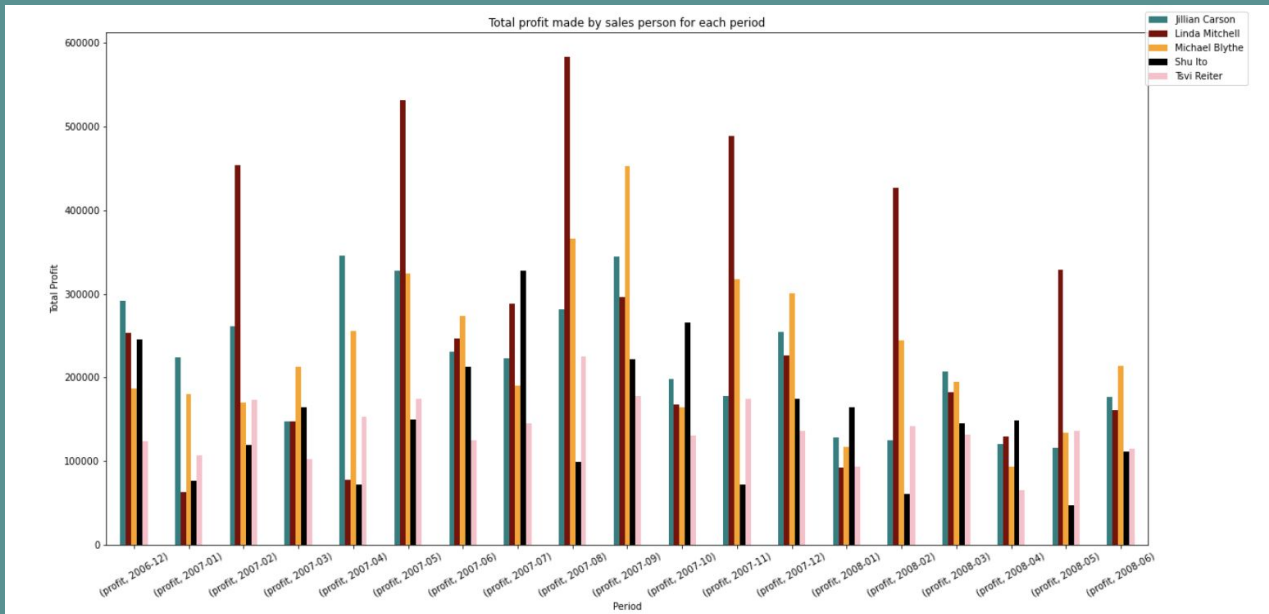
Products & sub products profit that went down

			profit_full_data	OrderQty_full_data	profit_part_data	OrderQty_part_data	average_profit_diff
Customer_City	Product_Category	Product_Sub_Category					
Gulfport	Bikes	Mountain Bikes	4656.810819	3.571429	2196.920793	2.333333	2459.890026
Kent	Bikes	Mountain Bikes	3353.879747	2.210526	1167.694090	1.100000	2186.185657
La Mesa	Bikes	Mountain Bikes	6177.369131	4.845070	2948.958183	3.172414	3228.410948
Mansfield	Bikes	Mountain Bikes	2668.076582	1.909091	1246.637350	1.500000	1421.439232
Maryville	Bikes	Mountain Bikes	4719.744531	3.045455	693.890458	1.000000	4025.854072
Millington	Bikes	Mountain Bikes	3835.515096	2.700000	822.624761	1.363636	3012.890334
Newport News	Bikes	Mountain Bikes	3545.768687	2.375000	2338.428200	2.200000	1207.340488
Orlando	Bikes	Mountain Bikes	3936.479606	3.504132	1557.237237	2.458333	2379.242369
Park City	Bikes	Mountain Bikes	5425.394072	4.000000	3508.349125	3.769231	1917.044947
Redmond	Bikes	Mountain Bikes	3253.502525	2.846154	2056.936008	2.615385	1196.566517
Sarasota	Bikes	Mountain Bikes	4296.625221	2.884615	482.595390	1.200000	3814.029831

- Here, as observed earlier, we can see that the profit for Mountain Bikes dropped compared to the previous months.
- These cities with these products and sub products had profit decreased by more than 1122(which is the average profit generated by United States).
- Definitely looking into these cities and the quality of products supplied to these cities will help to understand the low profit.

Sales Person and the impact on profit

Retain the top sales persons



The top 5 sales persons -
Jillian Carson, Linda Mitchell, Michael Blythe, Shu Ito, Tsvi Reiter

Data considered - United States region

- Sales person matters a lot when it comes to making the customer buy the products.
- There is always few sales persons who make more profit compared to other sales persons.
- All the top 5 sales persons made low profit during 2008-01, 2008-03 & 2008-04.
- Understand why was this seen - may be they were on vacation, or working part time ?

Key Takeaways

REGION	WEATHER	PRODUCT	RETENTION
<ul style="list-style-type: none">• United States region drives the overall profit and sales.• Identify the reasons for consistently low performing Cities.	<ul style="list-style-type: none">• There is a seasonal effect on the profit on sales.• Deep dive into the seasonal effect.• Cold weather is not suitable for bike rides.• Plan production accordingly.	<ul style="list-style-type: none">• Invest more in Bikes compared to other products.• Better marketing strategy for Accessories and Clothing and targeting the right audience.	<ul style="list-style-type: none">• Retain top performing Salespersons.• Plan better when the top performing sales persons are absent from work for long period.