Online Business Sales

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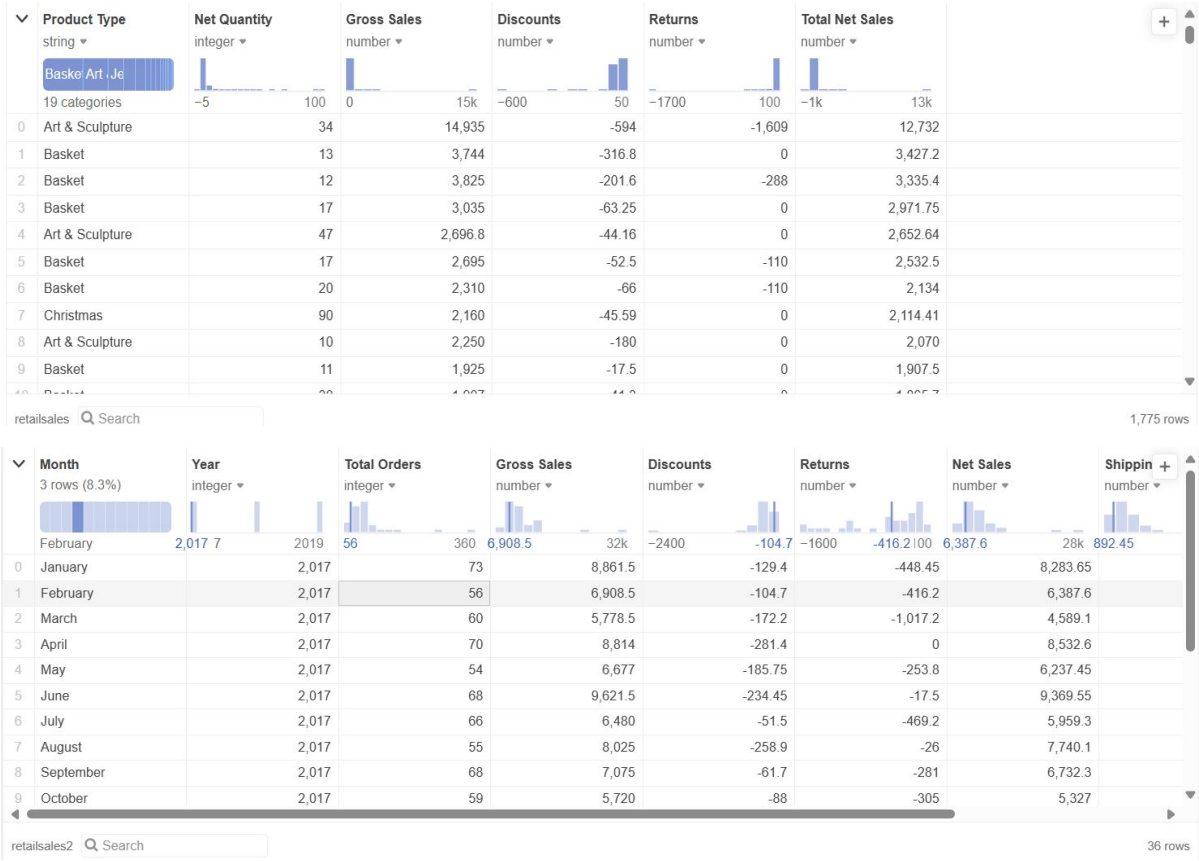
Data



	Product Type string	Net Quantity integer	Gross Sales number	Discounts number	Returns number	Total Net Sales number
	Baske Art Je 19 categories	−5 100	0 15k	−600 50	−1700 100	−1k 13k
0	Art & Sculpture	34	14,935	-594	-1,609	12,732
1	Basket	13	3,744	-316.8	0	3,427.2
2	Basket	12	3,825	-201.6	-288	3,335.4
3	Basket	17	3,035	-63.25	0	2,971.75
4	Art & Sculpture	47	2,696.8	-44.16	0	2,652.64
5	Basket	17	2,695	-52.5	-110	2,532.5
6	Basket	20	2,310	-66	-110	2,134
7	Christmas	90	2,160	-45.59	0	2,114.41
8	Art & Sculpture	10	2,250	-180	0	2,070
9	Basket	11	1,925	-17.5	0	1,907.5

retailsales Search 1,775 rows

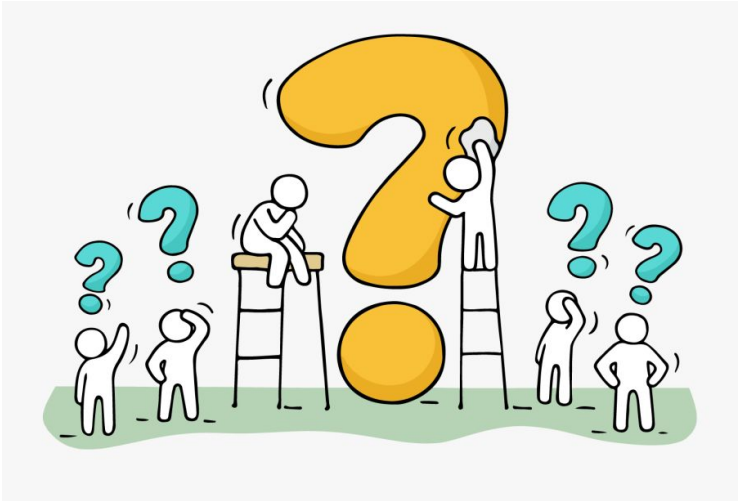
	Month 3 rows (8.3%)	Year integer	Total Orders integer	Gross Sales number	Discounts number	Returns number	Net Sales number	Shippin number
	February 2,017 7 2019		56 360	6,908.5 32k	−2400 -104.7	−1600 -416.2 00	6,387.6 28k	892.45
0	January	2,017	73	8,861.5	-129.4	-448.45	8,283.65	
1	February	2,017	56	6,908.5	-104.7	-416.2	6,387.6	
2	March	2,017	60	5,778.5	-172.2	-1,017.2	4,589.1	
3	April	2,017	70	8,814	-281.4	0	8,532.6	
4	May	2,017	54	6,677	-185.75	-253.8	6,237.45	
5	June	2,017	68	9,621.5	-234.45	-17.5	9,369.55	
6	July	2,017	66	6,480	-51.5	-469.2	5,959.3	
7	August	2,017	55	8,025	-258.9	-26	7,740.1	
8	September	2,017	68	7,075	-61.7	-281	6,732.3	
9	October	2,017	59	5,720	-88	-305	5,327	

retailsales2 Search 36 rows

[Online Business Sales 2017-2019 (kaggle.com)]

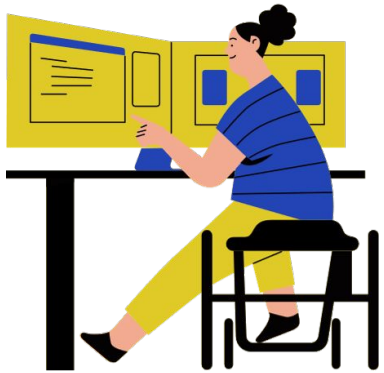
Research Question

What product generates the highest profit margin for the business, and which is returned the most frequently?

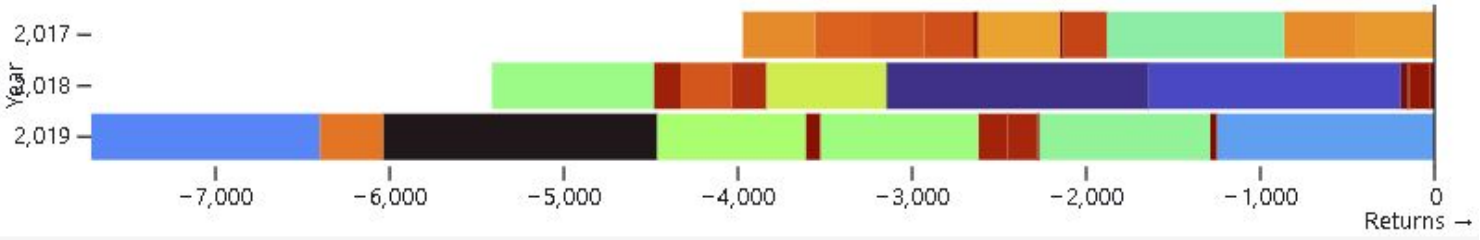


Problem Statement

To optimize business profitability, we aim to identify the product that generates the highest profit margin, while investigating which product experiences the highest frequency of returns. Additionally, analyze the moving average of these metrics over time to understand trends and patterns.



Gross Returns 2017-2019




```
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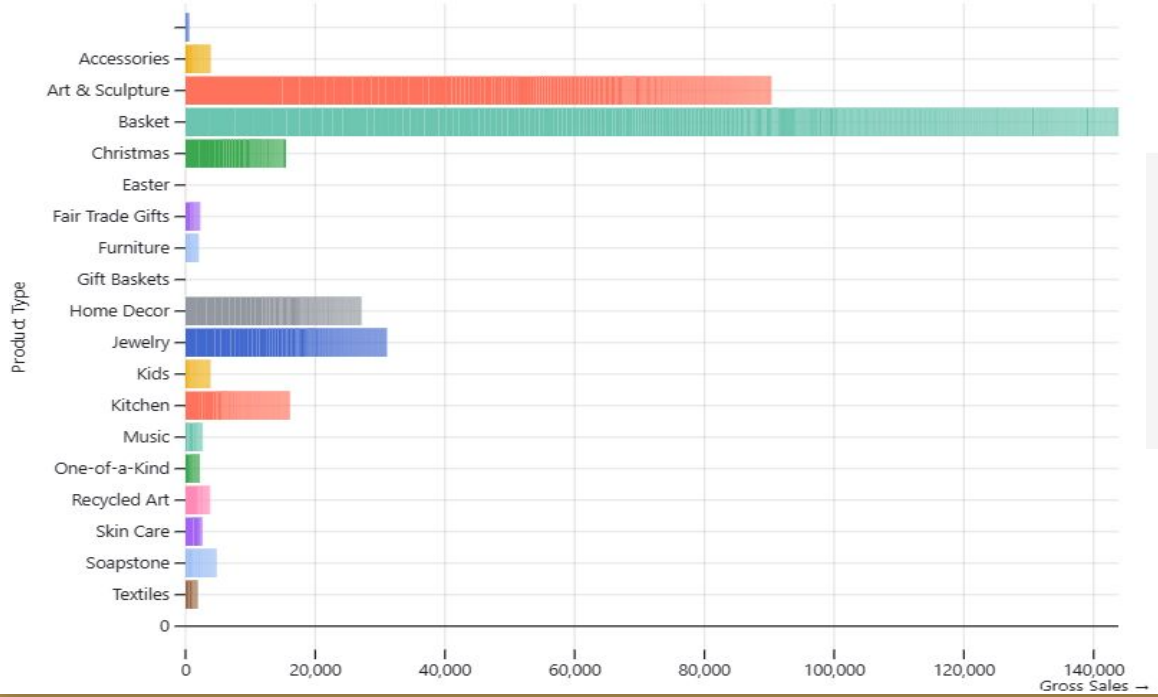
  ]
})
```

Gross Sales Per Product

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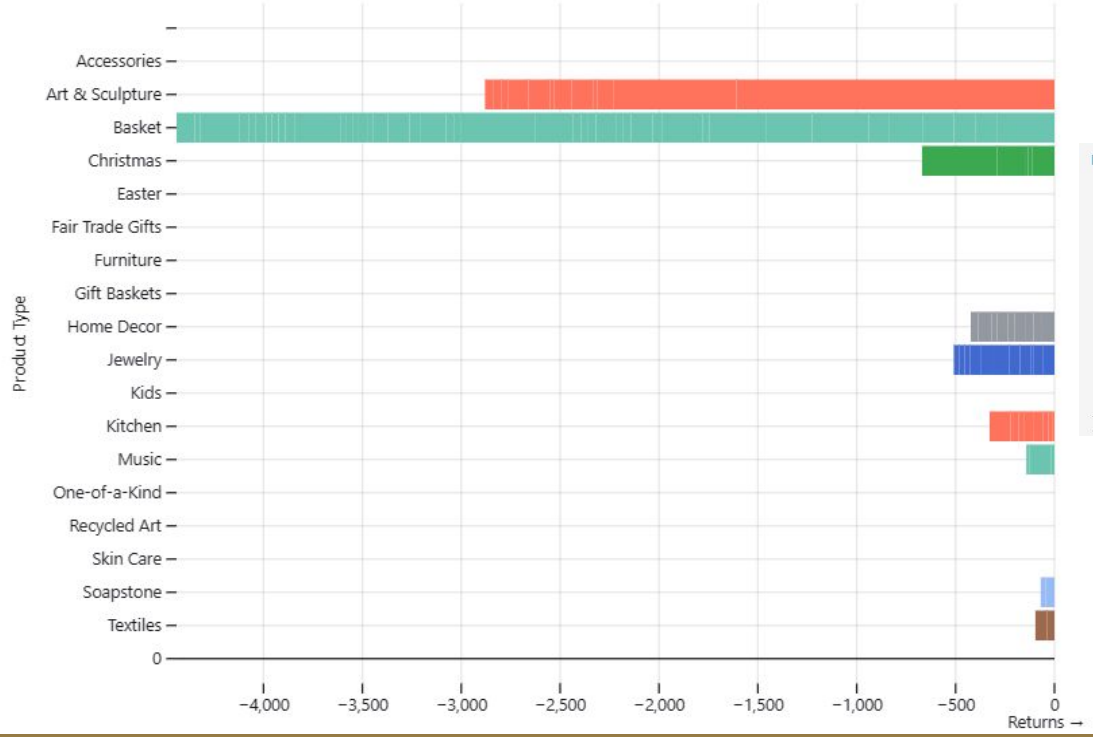
})
```

Individual Returns 2017-2019

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  ],
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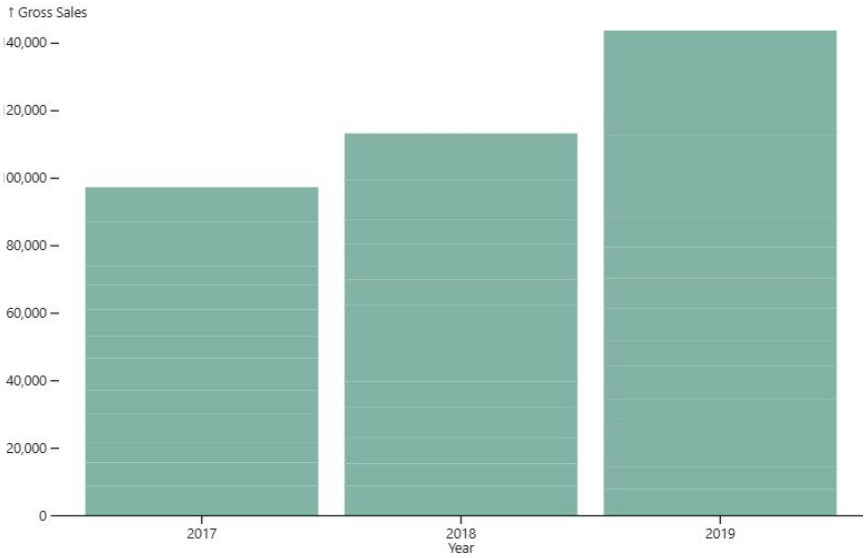
  marginLeft: 100,
})
```

Gross Sales Total 2017-2019

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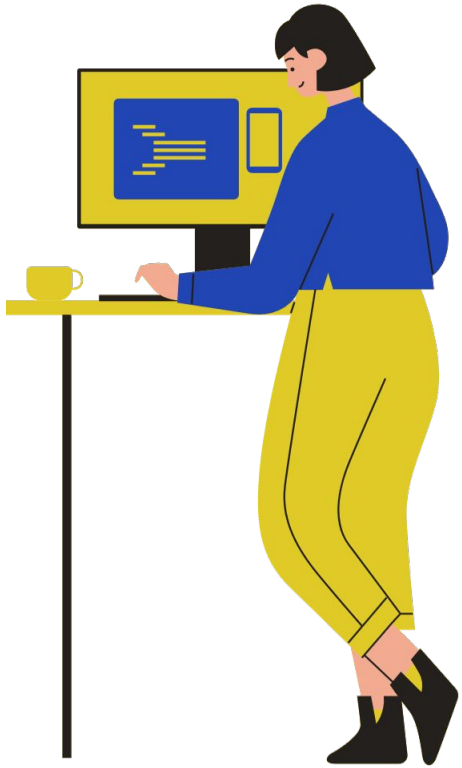
  }
})
```

Takeaways

1. **Product Performance:** Basket category contributes the most to gross sales. And the second category is Art & Sculpture. This can help business focusing marketing efforts, inventory management, and strategic planning.

2. **Return Trends:** Basket and Art & Sculpture have higher return rates. This information can be used to improve product quality, customer satisfaction, and return policies.



Conclusion

1. **Profitable Insights**: Our analysis identified that basket categories and art & sculpture generate the highest gross sales among all product categories from 2017 to 2019. This finding is pivotal for targeting our marketing strategies and optimizing inventory management.
2. **Return Analysis**: Both basket and art & sculpture categories also exhibit higher return rates. This correlation necessitates improvements in product quality and modifications to our return policies to enhance customer satisfaction and reduce losses due to returns.
3. **Trend Utilization**: By analyzing the moving averages of sales and returns, we were able to observe significant trends that will inform future strategic decisions, ensuring that our business remains adaptive and profitable.

Future Scope

1. **Extended Data Analysis**: Expanding our dataset beyond 2019 to include recent sales data will help in understanding the impact of recent global events on consumer behavior and sales trends.

2. **Customer Feedback Integration**: Incorporating customer feedback mechanisms to directly link consumer satisfaction with product performance metrics could further refine our product offerings and marketing strategies.

3. **Advanced Predictive Analytics**: Implementing more sophisticated predictive models to forecast sales and return patterns could optimize stock levels and potentially decrease overhead costs, driving greater profitability.

Thank you!

ObservableHQ Links

https://observablehq.com/d/1ce8fd833242348c
https://observablehq.com/d/a5828d20a04024e2