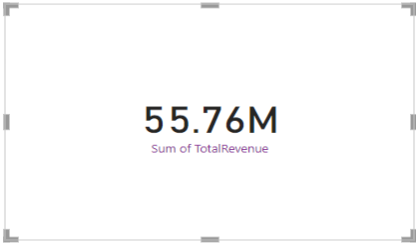


**PROJECT REPORT FOR DATASPARK:  
ILLUMINATING INSIGHTS  
FOR GLOBAL ELECTRONICS**

INSIGHT:	1. Total Sales Revenue: Calculate the total revenue from sales.
MYSQL QUERY:	SELECT SUM(s.Quantity * p.Unit_Price_USD) AS TotalRevenue FROM sales s JOIN products p ON s.ProductKey = p.ProductKey;
INSIGHT PLOT:	
MAXIMUM:	Sum of Total Revenue
RECOMMENDATION:	This insights gives Compare revenue performance with competitors to identify market gaps or opportunities.

INSIGHT:	2. Revenue by Product: Identify which products generate the most revenue.																						
MYSQL QUERY:	<pre> SELECT p.Product_Name, SUM(s.Quantity * p.Unit_Price_USD) AS Revenue FROM sales s JOIN products p ON s.ProductKey = p.ProductKey GROUP BY p.Product_Name ORDER BY Revenue DESC limit 10; </pre>																						
INSIGHT PLOT:	 <p>The chart is a horizontal bar chart titled 'SUM OF REVENUE BY PRODUCT_NAME AND PRODUCT_NAME'. It shows the revenue for 10 different products. The x-axis represents the 'Sum of Revenue' in millions, ranging from 0.0M to 0.6M. The y-axis lists the product names. The bars are color-coded and ordered by revenue from highest to lowest.</p> <table border="1"> <thead> <tr> <th>Product_Name</th> <th>Sum of Revenue (Approx.)</th> </tr> </thead> <tbody> <tr> <td>WWI Desktop PC2.33 X2330 Black</td> <td>0.5M</td> </tr> <tr> <td>Adventure Works Desktop ...</td> <td>0.48M</td> </tr> <tr> <td>Adventure Works Desktop ...</td> <td>0.47M</td> </tr> <tr> <td>Adventure Works Desktop ...</td> <td>0.46M</td> </tr> <tr> <td>Adventure Works Desktop ...</td> <td>0.45M</td> </tr> <tr> <td>WWI Desktop PC2.33 X2330 Silver</td> <td>0.44M</td> </tr> <tr> <td>WWI Desktop PC2.33 X2330 Silver</td> <td>0.43M</td> </tr> <tr> <td>Adventure Works 52" LCD ...</td> <td>0.4M</td> </tr> <tr> <td>Adventure Works 52" LCD ...</td> <td>0.38M</td> </tr> <tr> <td>WWI Desktop PC2.33 X2330 Silver</td> <td>0.35M</td> </tr> </tbody> </table>	Product_Name	Sum of Revenue (Approx.)	WWI Desktop PC2.33 X2330 Black	0.5M	Adventure Works Desktop ...	0.48M	Adventure Works Desktop ...	0.47M	Adventure Works Desktop ...	0.46M	Adventure Works Desktop ...	0.45M	WWI Desktop PC2.33 X2330 Silver	0.44M	WWI Desktop PC2.33 X2330 Silver	0.43M	Adventure Works 52" LCD ...	0.4M	Adventure Works 52" LCD ...	0.38M	WWI Desktop PC2.33 X2330 Silver	0.35M
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MINIMUM:	WWI Desktop PC2.33 X2330 Silver																						
RECOMMENDATION:	Identify top-performing products and optimize their features, pricing, or marketing.																						

INSIGHT:	3. Revenue by Category/Subcategory: Analyze revenue distribution across different categories and subcategories.																											
MYSQL QUERY:	SELECT p.Category, p.Subcategory, SUM(s.Quantity * p.Unit_Price_USD) AS Revenue FROM sales s JOIN products p ON s.ProductKey = p.ProductKey GROUP BY p.Category, p.Subcategory ORDER BY Revenue DESC;																											
INSIGHT PLOT:	<div><div><div><div></div><div>Back to report</div></div><div>SUM OF REVENUE</div><div>BY CATEGORY</div></div><div><table><thead><tr><th>Category</th><th>Revenue (M)</th><th>Percentage (%)</th></tr></thead><tbody><tr><td>Computers</td><td>19.3M</td><td>34.62%</td></tr><tr><td>Home Appliances</td><td>10.8M</td><td>19.36%</td></tr><tr><td>Cameras and camcorders</td><td>6.52M</td><td>11.69%</td></tr><tr><td>Cell phones</td><td>6.18M</td><td>11.09%</td></tr><tr><td>TV and Video</td><td>5.93M</td><td>10.63%</td></tr><tr><td>Audio</td><td>3.17M</td><td>5.68%</td></tr><tr><td>Music, Movies and Audio Bo...</td><td>3.13M</td><td>5.62%</td></tr><tr><td>Games and Toys</td><td>0.72M</td><td>1.3%</td></tr></tbody></table></div></div>	Category	Revenue (M)	Percentage (%)	Computers	19.3M	34.62%	Home Appliances	10.8M	19.36%	Cameras and camcorders	6.52M	11.69%	Cell phones	6.18M	11.09%	TV and Video	5.93M	10.63%	Audio	3.17M	5.68%	Music, Movies and Audio Bo...	3.13M	5.62%	Games and Toys	0.72M	1.3%
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MINIMUM:	GAMES AND TOYS																											
RECOMMENDATION:	Identify top-performing categories and optimize their product offerings, pricing, or marketing.																											


INSIGHT:	<p>4. Sales Trend Over Time:</p> <p>Observe how sales revenue trends over time (e.g., by month).</p>										
MYSQL QUERY:	<pre>SELECT DATE_FORMAT(s.Order_Date, '%Y-%m') AS Month, SUM(s.Quantity * p.Unit_Price_USD) AS Revenue FROM sales s JOIN products p ON s.ProductKey = p.ProductKey GROUP BY Month ORDER BY Month;</pre>										
INSIGHT PLOT:	 <p>The chart displays the monthly sum of revenue over a four-year period. The y-axis represents the 'Sum of Revenue' in millions, ranging from 0.0M to 3.0M. The x-axis represents the 'Month' from 2017 to 2020. The revenue starts at approximately 2.5M in 2017, drops to about 2.2M in 2018, and then shows a more significant decline to around 1.6M in 2019. From 2019 onwards, the revenue continues to decrease, reaching approximately 0.8M by the end of 2020.</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Sum of Revenue (Approximate)</th> </tr> </thead> <tbody> <tr> <td>2017</td> <td>2.5M</td> </tr> <tr> <td>2018</td> <td>2.2M</td> </tr> <tr> <td>2019</td> <td>1.6M</td> </tr> <tr> <td>2020</td> <td>0.8M</td> </tr> </tbody> </table>	Year	Sum of Revenue (Approximate)	2017	2.5M	2018	2.2M	2019	1.6M	2020	0.8M
Year	Sum of Revenue (Approximate)										
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2018	2.2M										
2019	1.6M										
2020	0.8M										
MAXIMUM:	649918.7783333659 – By Year of 2019										
MINIMUM:	526266.8997821808 – By Year of 2021										
RECOMMENDATION:	Analyze sales growth rates to identify areas of strength and weakness.										

INSIGHT:	5. Top Customers by Revenue: Identify which customers contribute the most to revenue.												
MYSQL QUERY:	<pre>SELECT c.Name, SUM(s.Quantity * p.Unit_Price_USD) AS Revenue FROM sales s JOIN products p ON s.ProductKey = p.ProductKey JOIN customers c ON s.CustomerKey = c.CustomerKey GROUP BY c.Name ORDER BY Revenue DESC LIMIT 5;</pre>												
INSIGHT PLOT:	<div><div><a href="#">Back to report</a></div><div>SUM OF REVENUE BY NAME AND NAME</div><div><div>Name</div><div><div>Matthew Flemming</div><div>Stephan Rothstein</div><div>Karen Jones</div><div>Zrina Topic</div><div>Stefanie Hartmann</div></div></div><div><div>Sum of Revenue</div><div><div>70K</div><div>60K</div><div>50K</div><div>40K</div><div>30K</div><div>20K</div><div>10K</div><div>0K</div></div></div><div><div>Matthew Flemming</div><div>Stephan Rothstein</div><div>Karen Jones</div><div>Zrina Topic</div><div>Stefanie Hartmann</div></div><div>Name</div></div> <table><thead><tr><th>Name</th><th>Sum of Revenue</th></tr></thead><tbody><tr><td>Matthew Flemming</td><td>61871.6991815567</td></tr><tr><td>Stephan Rothstein</td><td>45292.82074</td></tr><tr><td>Karen Jones</td><td>41521.5299282074</td></tr><tr><td>Zrina Topic</td><td>41521.5299282074</td></tr><tr><td>Stefanie Hartmann</td><td>41521.5299282074</td></tr></tbody></table>	Name	Sum of Revenue	Matthew Flemming	61871.6991815567	Stephan Rothstein	45292.82074	Karen Jones	41521.5299282074	Zrina Topic	41521.5299282074	Stefanie Hartmann	41521.5299282074
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MAXIMUM:	Matthew Flemming - 61871.6991815567 Revenue												
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RECOMMENDATION:	Focus on retaining high-value customers to maintain revenue.												

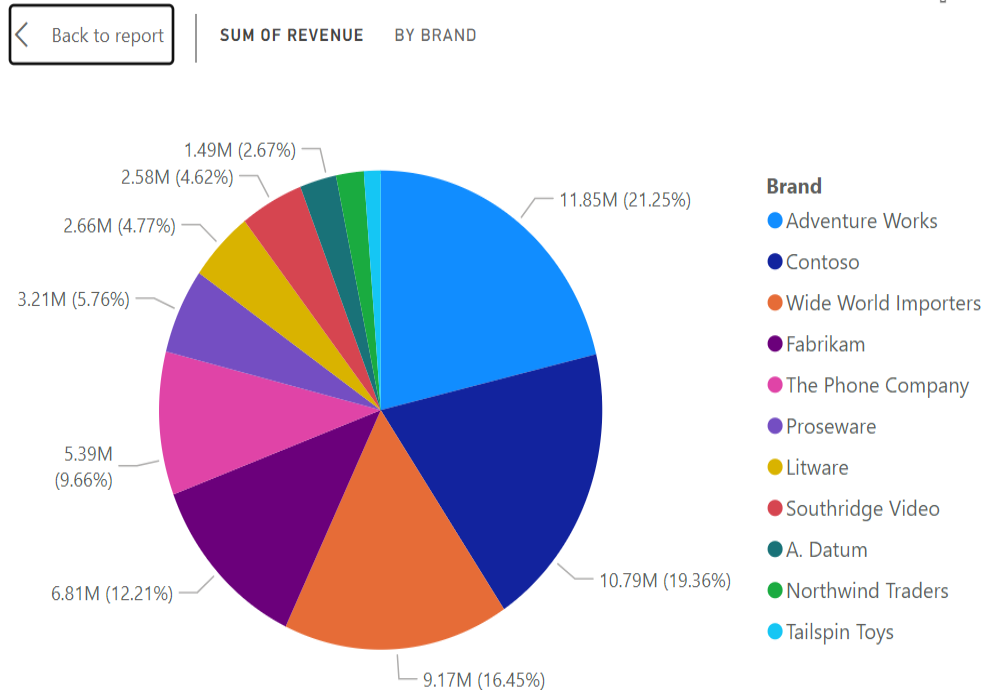
INSIGHT:	6. Product Sales by Color: Determine which colors are most popular among products.																																																
MYSQL QUERY:	SELECT p.Color, SUM(s.Quantity * p.Unit_Price_USD) AS Revenue FROM sales s JOIN products p ON s.ProductKey = p.ProductKey GROUP BY p.Color ORDER BY Revenue DESC;																																																
INSIGHT PLOT:	<div><div><div>&lt; Back to report</div><div>SUM OF REVENUE BY COLOR</div></div><div><table><tr><th>Color</th><th>Revenue (M)</th><th>Percentage (%)</th></tr><tr><td>Black</td><td>13.86</td><td>24.86%</td></tr><tr><td>White</td><td>11.93</td><td>21.4%</td></tr><tr><td>Silver</td><td>10.41</td><td>18.67%</td></tr><tr><td>Grey</td><td>4.3</td><td>7.71%</td></tr><tr><td>Brown</td><td>3.71</td><td>6.66%</td></tr><tr><td>Blue</td><td>3.13</td><td>5.62%</td></tr><tr><td>Red</td><td>1.91</td><td>3.42%</td></tr><tr><td>Green</td><td>1.88</td><td>3.37%</td></tr><tr><td>Gold</td><td>1.59</td><td>2.86%</td></tr><tr><td>Pink</td><td>1.06</td><td>1.9%</td></tr><tr><td>Orange</td><td>0</td><td>0%</td></tr><tr><td>Yellow</td><td>0</td><td>0%</td></tr><tr><td>Silver Grey</td><td>0</td><td>0%</td></tr><tr><td>Azure</td><td>0</td><td>0%</td></tr><tr><td>Purple</td><td>0</td><td>0%</td></tr></table></div></div>	Color	Revenue (M)	Percentage (%)	Black	13.86	24.86%	White	11.93	21.4%	Silver	10.41	18.67%	Grey	4.3	7.71%	Brown	3.71	6.66%	Blue	3.13	5.62%	Red	1.91	3.42%	Green	1.88	3.37%	Gold	1.59	2.86%	Pink	1.06	1.9%	Orange	0	0%	Yellow	0	0%	Silver Grey	0	0%	Azure	0	0%	Purple	0	0%
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MAXIMUM:	Black- 13862231.5054299(REVENUE)																																																
MINIMUM:	Transparent- 626.2200(REVENUE)																																																
RECOMMENDATION:	Adjust prices by color to maximize revenue.																																																

INSIGHT:	7. Revenue by Gender: Analyze sales revenue distribution by customer gender.						
MYSQL QUERY:	SELECT c.Gender, SUM(s.Quantity * p.Unit_Price_USD) AS Revenue FROM sales s JOIN products p ON s.ProductKey = p.ProductKey JOIN customers c ON s.CustomerKey = c.CustomerKey GROUP BY c.Gender ORDER BY Revenue DESC;						
INSIGHT PLOT:	<div><div><div><div>&lt;</div><div>Back to report</div></div><div><div>SUM OF REVENUE</div><div>BY GENDER AND GENDER</div></div></div><div><div>Gender</div><div><div>Male</div><div>Female</div></div></div><div><div>Sum of Revenue</div><div><div>30M</div><div>25M</div><div>20M</div><div>15M</div><div>10M</div><div>5M</div><div>0M</div></div><div><div>Male</div><div>Female</div></div><div>Gender</div></div><table><thead><tr><th>Gender</th><th>Sum of Revenue</th></tr></thead><tbody><tr><td>Male</td><td>28M</td></tr><tr><td>Female</td><td>27M</td></tr></tbody></table></div>	Gender	Sum of Revenue	Male	28M	Female	27M
Gender	Sum of Revenue						
Male	28M						
Female	27M						
MAXIMUM:	Sum of Revenue – Male						
MINIMUM :	Sum of Revenue - Female						
RECOMMENDATION:	Adjust prices to optimize revenue from each gender.						



INSIGHT:	8. Average Order Value: Calculate the average value of each order.
MYSQL QUERY:	<pre> SELECT AVG(order_value) AS AverageOrderValue FROM (   SELECT s.Order_Number, SUM(s.Quantity * p.Unit_Price_USD) AS order_value   FROM sales s   JOIN products p ON s.ProductKey = p.ProductKey   GROUP BY s.Order_Number ) AS OrderValues; </pre>
INSIGHT PLOT:	
MAXIMUM:	Sum of Average Order value
RECOMMENDATION:	Optimize prices to increase AOV.

INSIGHT:	9. Customer Purchase Frequency: Determine how often each customer makes a purchase.																																																																										
MYSQL QUERY:	SELECT c.Name , COUNT(s.Order_Number) AS PurchaseCount FROM sales s JOIN customers c ON s.CustomerKey = c.CustomerKey GROUP BY c.Name ORDER BY PurchaseCount DESC;																																																																										
INSIGHT PLOT:	<div><div><a href="#">Back to report</a></div><div>COUNT OF NAME BY PURCHASECOUNT</div><table border="1"><thead><tr><th>PurchaseCount</th><th>Count of Name</th></tr></thead><tbody><tr><td>1</td><td>1550</td></tr><tr><td>2</td><td>1580</td></tr><tr><td>3</td><td>1700</td></tr><tr><td>4</td><td>1400</td></tr><tr><td>5</td><td>1050</td></tr><tr><td>6</td><td>950</td></tr><tr><td>7</td><td>800</td></tr><tr><td>8</td><td>600</td></tr><tr><td>9</td><td>500</td></tr><tr><td>10</td><td>400</td></tr><tr><td>11</td><td>300</td></tr><tr><td>12</td><td>250</td></tr><tr><td>13</td><td>200</td></tr><tr><td>14</td><td>150</td></tr><tr><td>15</td><td>120</td></tr><tr><td>16</td><td>100</td></tr><tr><td>17</td><td>80</td></tr><tr><td>18</td><td>60</td></tr><tr><td>19</td><td>40</td></tr><tr><td>20</td><td>30</td></tr><tr><td>21</td><td>20</td></tr><tr><td>22</td><td>15</td></tr><tr><td>23</td><td>10</td></tr><tr><td>24</td><td>8</td></tr><tr><td>25</td><td>5</td></tr><tr><td>26</td><td>3</td></tr><tr><td>27</td><td>2</td></tr><tr><td>28</td><td>1</td></tr><tr><td>29</td><td>1</td></tr><tr><td>30</td><td>1</td></tr><tr><td>31</td><td>1</td></tr><tr><td>32</td><td>1</td></tr><tr><td>33</td><td>1</td></tr><tr><td>34</td><td>1</td></tr><tr><td>35</td><td>1</td></tr><tr><td>36</td><td>1</td></tr></tbody></table></div>	PurchaseCount	Count of Name	1	1550	2	1580	3	1700	4	1400	5	1050	6	950	7	800	8	600	9	500	10	400	11	300	12	250	13	200	14	150	15	120	16	100	17	80	18	60	19	40	20	30	21	20	22	15	23	10	24	8	25	5	26	3	27	2	28	1	29	1	30	1	31	1	32	1	33	1	34	1	35	1	36	1
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RECOMMENDATION:	Identify opportunities to upsell or cross-sell to frequent customers.																																																																										

INSIGHT:	10. Revenue Contribution by Brand: Analyze the revenue contribution from each brand.																																				
MYSQL QUERY:	SELECT p.Brand, SUM(s.Quantity * p.Unit_Price_USD) AS Revenue FROM sales s JOIN products p ON s.ProductKey = p.ProductKey GROUP BY p.Brand ORDER BY Revenue DESC;																																				
INSIGHT PLOT:	<div><div><div>Back to report</div><div>SUM OF REVENUE BY BRAND</div></div><table><thead><tr><th>Brand</th><th>Revenue (M)</th><th>Percentage (%)</th></tr></thead><tbody><tr><td>Adventure Works</td><td>11.85M</td><td>21.25%</td></tr><tr><td>Contoso</td><td>10.79M</td><td>19.36%</td></tr><tr><td>Wide World Importers</td><td>9.17M</td><td>16.45%</td></tr><tr><td>Fabrikam</td><td>6.81M</td><td>12.21%</td></tr><tr><td>The Phone Company</td><td>5.39M</td><td>9.66%</td></tr><tr><td>Proseware</td><td>3.21M</td><td>5.76%</td></tr><tr><td>Litware</td><td>2.66M</td><td>4.77%</td></tr><tr><td>Southridge Video</td><td>2.58M</td><td>4.62%</td></tr><tr><td>A. Datum</td><td>1.49M</td><td>2.67%</td></tr><tr><td>Northwind Traders</td><td></td><td></td></tr><tr><td>Tailspin Toys</td><td></td><td></td></tr></tbody></table></div>	Brand	Revenue (M)	Percentage (%)	Adventure Works	11.85M	21.25%	Contoso	10.79M	19.36%	Wide World Importers	9.17M	16.45%	Fabrikam	6.81M	12.21%	The Phone Company	5.39M	9.66%	Proseware	3.21M	5.76%	Litware	2.66M	4.77%	Southridge Video	2.58M	4.62%	A. Datum	1.49M	2.67%	Northwind Traders			Tailspin Toys		
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MINIMUM:	Tailspin Toys - 682730.9441(REVENUE)																																				
RECOMMENDATION:	Adjust brand positioning to appeal to target audiences.																																				