

# Digital Sales Performance Dashboard

## Final Project – Business Intelligence Analyst

**Project-Based Internship | Racammin Academy x Bank Muamalat**

Presented by  
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## About Me

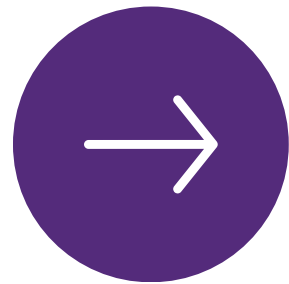
Data Analyst with **2 years of hands-on experience** and a strong academic foundation in Mathematics with a focus on Data Science. Demonstrated expertise in end-to-end data analysis processes, including data wrangling, statistical modeling, and translating complex data into actionable business insights. Proficient in **R, Python, SQL, Tableau, Looker Studio, and Power BI**, and certified in industry-recognized programs by IBM, Google, Microsoft, Tableau, and CFI. Skilled in designing dashboards and reports, communicating insights effectively through compelling data storytelling, and aligning analytics with strategic goals through a collaborative, solution-oriented approach.

**Yuni Astari**

# Case Study

As a Business Intelligence Analyst in a simulation project at PT Sejahtera Bersama, I was faced with the challenge of fragmented sales data spread across four separate sources (Customers, Orders, Products, and ProductCategory), which hindered management from gaining a comprehensive view of business performance. I was responsible for transforming this raw, isolated data into an integrated analytics ecosystem by designing an efficient data model, building a simple data pipeline, and creating a master table as a single source of truth. The outcome was an interactive and intuitive BI dashboard that delivers strategic insights into sales performance, customer behavior, and product trends—accompanied by data-driven analysis and actionable recommendations for key stakeholders.

# Tools



## Microsoft Excel



Used for initial data exploration, cleaning, and understanding data structure before building the master dataset.

## Google BigQuery



Utilized for querying large datasets, performing data transformation, and creating the integrated master table using SQL.

## Looker Studio



Employed to design an interactive and dynamic dashboard, visualizing total sales, order quantity, top-performing product categories, and other key metrics.



# Dataset

Product...ory

ProductCategory

QueryOpen inShareCopySnapshotDeleteExport

Refresh

SchemaDetailsPreviewTable ExplorerPreviewInsightsLineageData ProfileData Quality

Row	CategoryID	CategoryName	CategoryAbbreviation
1	1	Blueprints	BP
2	2	Drone Kits	DK
3	3	Drones	DS
4	4	eBooks	EB
5	5	Robot Kits	RK
6	6	Robots	RS
7	7	Training Videos	TV

Orders

QueryOpen inShareCopySnapshotDeleteExport

Refresh

SchemaDetailsPreviewTable ExplorerPreviewInsightsLineage

Row	OrderID	Date	CustomerID	ProdNumber	Quantity
1	1758	2021-01-15	923	BP101	1
2	404	2020-03-26	1256	BP101	2
3	575	2020-05-06	635	BP101	2
4	1098	2020-08-25	1480	BP101	2
5	1320	2020-10-10	534	BP101	2
6	1755	2021-01-14	1564	BP101	2
7	1756	2021-01-14	619	BP101	2
8	2029	2021-03-11	827	BP101	2
9	2870	2021-09-07	500	BP101	2
10	3158	2021-11-21	379	BP101	2
11	3183	2021-11-26	811	BP101	2
12	341	2020-03-10	1072	BP101	3
13	589	2020-05-08	2039	BP101	3
14	631	2020-05-15	1623	BP101	3
15	895	2020-07-10	1427	BP101	3
16	1131	2020-09-01	1015	BP101	3
17	1895	2021-02-11	1406	BP101	3
18	2055	2021-03-16	1375	BP101	3
19	2208	2021-04-19	1258	BP101	3
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Products

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Refresh

SchemaDetailsPreviewTable ExplorerPreviewInsightsLineageData ProfileData Quality

Row	ProdNumber	ProdName	Category	Price
1	BP104	Cat Robot Blueprint	1	4.99
2	BP108	Panda Robot Blueprint	1	7.99
3	BP102	Bsquare Robot Blueprint	1	8.99
4	BP106	Hexacopter Drone Blueprint	1	8.99
5	BP101	All Eyes Drone Blueprint	1	9.99
6	BP109	QuadroCopter Blueprint	1	10.99
7	BP110	Sleepy Eye Blueprint	1	11.99
8	BP105	Creature Robot Arms Blueprint	1	12.0
9	BP107			
10	BP111			
11	EB504			
12	EB507			
13	EB505			
14	EB513			
15	EB518			
16	EB508			
17	EB519			
18	EB506			
19	EB516			
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Customers

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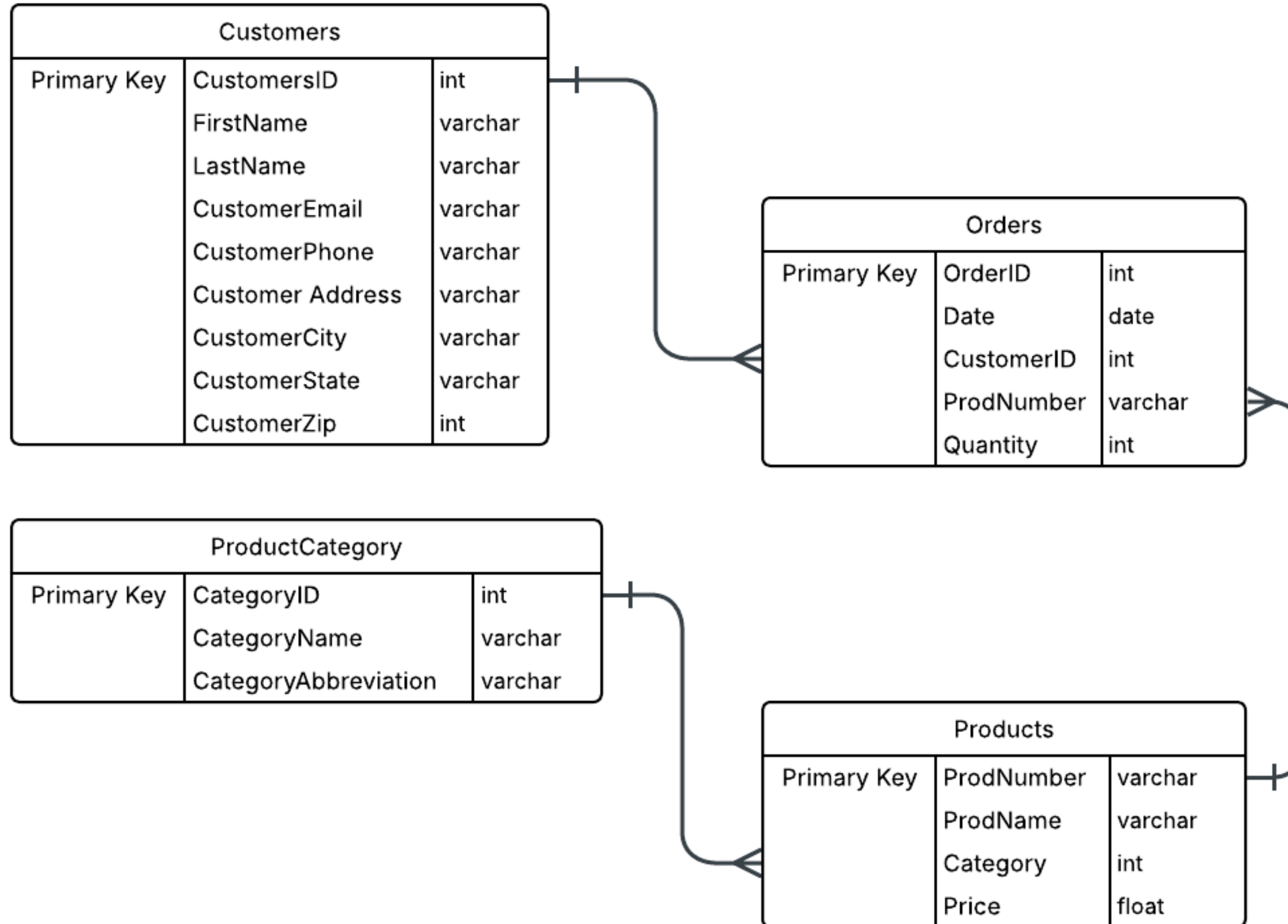
Refresh

SchemaDetailsPreviewTable ExplorerPreviewInsightsLineageData ProfileData Quality

Row	CustomerID	FirstName	LastName	CustomerEmail	CustomerPhone	CustomerAddress	CustomerCity	CustomerState
1	1368	Buck	Meiklam	bmeiklamiv@myspace.com#m...	205-789-4928	8943 Rusk Drive	Birmingham	Alabama
2	260	Charlena	Lille	clillea8@nasa.gov#mailto:clille...	205-464-9921	13293 Macpherson Pass	Birmingham	Alabama
3	1694	Robinia	Balog	rbalogiw@arstechnica.com#ma...	205-133-6098	565 Fairfield Terrace	Birmingham	Alabama
4	1480	Bryna	Cumberpatch	bcumberpatchjr@auda.org.au#mailto:bcumberpatchjr@auda.org.au#	205-731-4813	6665 Marcy Street	Birmingham	Alabama
5	244	Jobie	Pinchen	jpinchen15@behance.net#mailt...	205-844-2402	4319 Coleman Lane	Birmingham	Alabama
6	705	Esmeralda	McRory	emcrory6y@mac.com#mailto:e...	205-885-5499	368 Briar Crest Circle	Birmingham	Alabama
7	954	Llewellyn	Fromont	lfromonte9@de.vu#mailto:lfrom...	205-279-7028	14 Rowland Lane	Birmingham	Alabama
8	1196	Betsy	Buncombe	bbuncombeqn@goodreads.co...	205-757-8485	30136 Fairview Hill	Birmingham	Alabama
9	1360	Forrest	Lowdeane	flowdeaneb7@google.ca#mailt...	205-191-4282	728 Barnett Place	Birmingham	Alabama
10	413	Demetrius	O' Liddy	dofz@ftc.gov#mailto:dofz@ftc....	205-983-4144	771 American Lane	Birmingham	Alabama
11	1725	Carlyn	Syce	csycea9@reuters.com#mailto:c...	205-900-6485	4353 Mayer Park	Birmingham	Alabama
12	157	Odelia	Halbard	ohalbardv@booking.com#mailt...	205-438-8465	1613 Calypso Street	Birmingham	Alabama
13	495	Odelia	Jamblin	ojamblinbx@ycombinator.com#mailto:ojamblinbx@ycombinator.com#	205-527-7124	10 Hoepker Avenue	Birmingham	Alabama
14	1036	Ginger	Daspar	gdaspark4@unesco.org#mailto:...	205-171-0996	82475 Lindbergh Place	Birmingham	Alabama
15	1285	Bryanty	Issit	bissitbb@oaic.gov.au#mailto:bl...	205-871-2970	89 Dennis Place	Birmingham	Alabama
16	1845	Marco	Fernley	mfernleyah@fastcompany.co	205-426-6515	285 Lunder Place	Birmingham	Alabama

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# Entity Relationship Database



# SQL Query

```

1 SELECT
2     c.CustomerEmail AS CustomerEmail,
3     c.CustomerCity AS CustomerCity,
4     o.Date AS OrderDate,
5     o.Quantity AS OrderQty,
6     p.ProdName AS ProductName,
7     p.Price AS ProductPrice,
8     pc.CategoryName AS ProductCategoryName,
9     (o.Quantity * p.Price) AS TotalSales
10 FROM
11     `muamalat_pbi.Orders` AS o
12 JOIN
13     `muamalat_pbi.Customers` AS c
14     ON o.CustomerID = c.CustomerID
15 JOIN
16     `muamalat_pbi.Products` AS p
17     ON o.ProdNumber = p.ProdNumber
18 JOIN
19     `muamalat_pbi.ProductCategory` AS pc
20     ON p.Category = pc.CategoryID
21 ORDER BY
22     OrderDate ASC;

```

Query results

✔ Query completed

# Master Table

Query results

Save results

Open in

Job information

Results

Chart

JSON

Execution details

Execution graph

Row	CustomerEmail	CustomerCity	OrderDate	OrderQty	ProductName	ProductPrice	ProductCategoryName	TotalSales	
1	edew@nba.com#mailto:edew@...	Honolulu	2020-01-01	1	BYOD-220	69.0	Drone Kits	69.0	
2	fvaslerqt@comsenz.com#mailt...	Jackson	2020-01-01	2	Polar Robots	23.99	eBooks	47.98	
3	llespercx@com.com#mailto:lle...	Des Moines	2020-01-01	5	SCARA Robots	19.5	eBooks	97.5	
4	lfromonte9@de.vu#mailto:lfrom...	Birmingham	2020-01-01	5	Spherical Robots	16.75	eBooks	83.75	
5	tmckernot@tinyurl.com#mailto:...	Katy	2020-01-01	3	RWW-75 Robot	883.0	Robots	2649.0	
6	gstiggersdd@eventbrite.com#mailto:gstiggersdd@eventbrite.com#	Saint Petersburg	2020-01-01	6	Drone Video Techniques	37.99	Training Videos	227.94	
7	akingaby78@deviantart.com#m...	West Palm Beach	2020-01-02	2	Ladybug Robot Blueprint	12.0	Blueprints	24.0	
8	jzellick84@ustream.tv#mailto:j...	Washington	2020-01-02	5	BYOD-100	54.0	Drone Kits	270.0	
9	jcolthurstgu@cbsnews.com#m...	Sacramento	2020-01-02	2	DTE-QFN20 Drone	250.0	Drones	500.0	
10	ohalbardv@booking.com#mailt...	Birmingham	2020-01-02	3	Fixed Wing Drones	15.5	eBooks	46.5	
11	aguiongo@behance.net#mailto:...	Houston	2020-01-02	2	BYOR-2640S	189.0	Robot Kits	378.0	
12	gmirrrees4v@state.tx.us#mailto...	Washington	2020-01-02	2	BYOR-2640S	189.0	Robot Kits	378.0	
13	croyledge@dot.gov#mailto:croyl...	Virginia Beach	2020-01-02	2	BYOR-3000	214.0	Robot Kits	428.0	
14	lcatebhval@quantcast.com#ma...	Des Moines	2020-01-02	2	Drone Video Techniques	37.99	Training Videos	75.98	

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1.8M

Total Sales



11.7K

Order Quantity



3,339

Total Customer



Category



Product



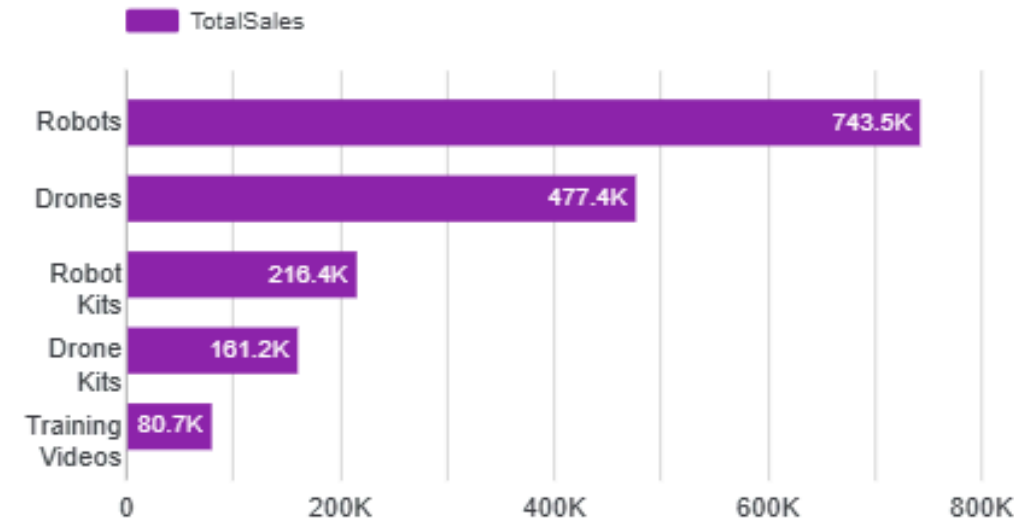
City



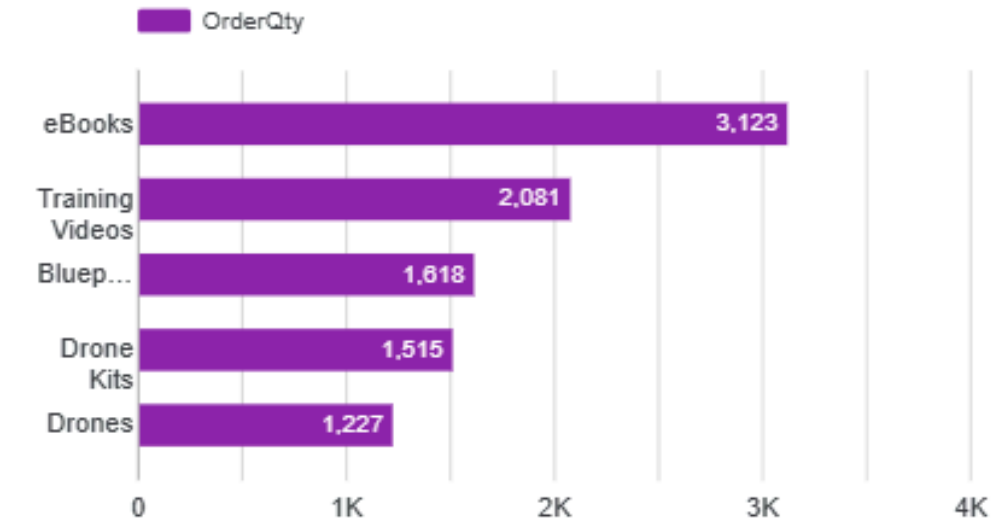
## Digital Sales Performance Dashboard

Select date range

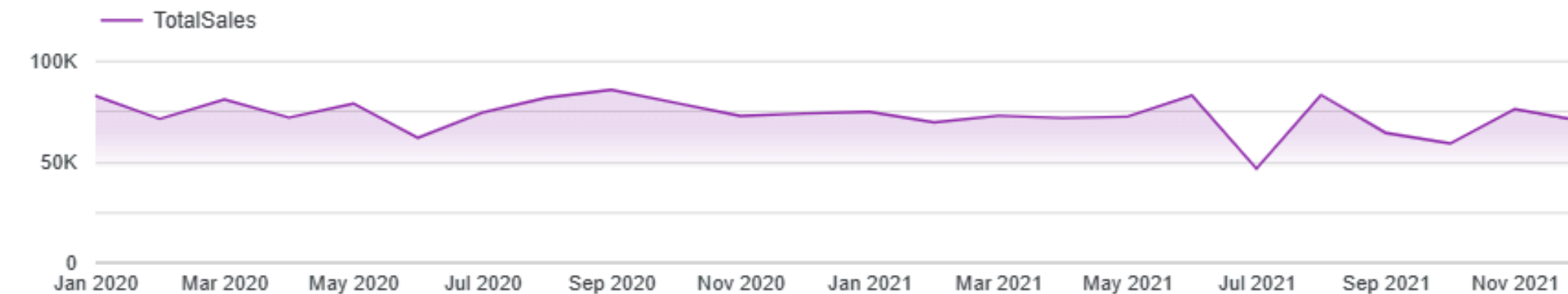
Top Five Total Sales by Product Category



Top Five Order Quantity by Product Category



Sales Trend Over Time



Sales and Orders by City

	City	Order Quantity	Total Sales
1.	Washington	308	55,381.94
2.	Houston	249	33,761.49
3.	San Diego	203	29,228.59
4.	Atlanta	153	18,984.66
5.	Sacramento	153	33,380.2

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Sales and Orders by Product Category

	Category	Order Quantity	Total Sales
1.	eBooks	3,123	58,968.41
2.	Training Videos	2,081	80,716.15
3.	Robots	1,053	743,505
4.	Robot Kits	1,037	216,437
5.	Drones	1,227	477,447

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# Key Insights



## Strong Overall Sales Performance

\$1.8M total sales from 11.7K orders and 3,339 customers indicate a healthy digital transaction ecosystem.



## Product Value vs Volume Divergence

Product Value vs Volume Divergence

- Robots lead in revenue (Rp 743.5K)
- eBooks dominate in quantity (3,123 units)

→ Each requires a different strategic approach.



## Fluctuating Sales Trend Observed

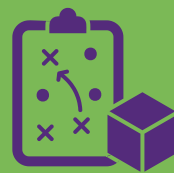
Sales performance in 2021 showed a non-linear, fluctuating pattern, with noticeable peaks in June and August. This indicates that sales were not concentrated around traditional year-end seasons, but rather driven by other factors such as mid-year promotions, product launches, or regional campaigns.



## Geographic Sales Concentration

Cities like Washington and Houston contribute the most, showing regional market strength.

# Recommendations for Strategic Action



## Segment Product Strategy

- Focus on value-based marketing for Robots
- Leverage eBooks as entry-level products for customer acquisition



## Optimize Timing of Campaigns

- Focus promotions on mid-year months (June & August)
- Identify & replicate drivers behind past sales spikes
- Watch for early trends to adjust campaign timing dynamically



## Prioritize Best-Performing Cities

- Prioritize Washington & Houston for local campaigns and logistics investment
- Explore similar city profiles for expansion



## Build on Customer Base

- Launch loyalty or referral programs for 3,339 active customers
- Analyze churn potential and purchasing patterns

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# Thank You!

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