

Products Sales Analysis Report

1) Executive summary

- **Total sales (all years): \$2,296,919.70**
- **Total profit (all years): \$286,409.85**
- **Total orders / transactions (rows): 9,993**
- **Average order value (AOV): \$229.85**
- **Average profit per order: \$28.66**
- **Overall profit margin: ~12.47%** (profit / sales)

Data covers **2014–2017**. Data quality checks show **no missing values** in the main Sales sheet for the core columns (Order Date, Sales, Profit, etc.).

2) Key performance indicators (KPIs)

- **Total Sales: \$2.297M**
 - **Total Profit: \$286.41k**
 - **Profit margin: ~12.5%**
 - **AOV: \$229.85**
 - **Orders: 9,993**
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3) Yearly performance & growth

Yearly totals and year-over-year change:

Year	Sales	Profit	Orders	Sales growth vs prior year	Profit growth vs prior year
2014	\$483,966.19	\$49,556.12	1,992	—	—
2015	\$470,532.46	\$61,618.69	2,102	-2.78%	+24.34%
2016	\$609,205.86	\$81,795.27	2,587	+29.47%	+32.74%
2017	\$733,215.19	\$93,439.77	3,312	+20.36%	+14.24%

Insights:

- After a small sales dip in 2015, sales recovered strongly in 2016 (+29.5%) and again in 2017 (+20.4%).

- Profit improved faster than sales in early years — profit growth notably strong in 2015–2016 — indicating margin improvements or better product/cost mix.
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4) Category & product performance

- **Top Category (by sales): Technology** — \$836,154.10 in sales and \$145,455.66 profit (largest share of revenue and profit).
- Other high-sales categories (examples shown in data): **Phones, Chairs, Storage** (see category table for exact ranks).
- **Top products** (top 10 by sales) and their sales/profit were extracted — see delivered table (Top 10 Products by Sales) for exact names and numbers.

Insight: Technology is carrying the largest share of revenue and profit; focusing promotions, pricing optimization, and inventory availability in Technology will likely move overall performance.

5) Geography (state) performance

- **Top state (by sales): California** — \$457,687.68 sales and \$76,381.60 profit.
- Several other states contribute materially — top 20 states were prepared and displayed.

Insight: California is a major market (≈20% of total sales). Consider targeted campaigns, localized promotions or dedicated sales effort in top states to further increase share and margins.

6) Customers

- **Top customers by sales** and **top customers by profit** tables were generated (top 10 lists shown).
- The workbook had a separate sheet listing the **Top 5 customers by profit** — these customers appear in the top-profit list and are critical to retain.

Insight: A relatively small number of customers generate disproportionate revenue and profit; invest in retention (discount tiers, priority support, loyalty offers) for these customers.

7) Monthly trend & seasonality

- Monthly aggregation was computed (Year-Month totals). The dataset shows rising monthly sales across years, with seasonal patterns visible when the monthly series is reviewed (plots/tables provided interactively). The year-on-year increase in monthly totals is consistent with the annual growth noted above.

Insight: Sales trend is upward through 2017. Consider aligning promotions or inventory build-up to the months showing consistent peaks in the monthly series.

8) Data quality & coverage

- **No missing values** detected in Sales sheet columns used for core KPI calculations.
 - Years covered: **2014, 2015, 2016, 2017**. Confirm whether you want to append later years if available.
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9) Actionable recommendations

1. **Focus investments on Technology** — it's the biggest category by sales and profit. Actions: increase stock depth for top SKUs, run targeted promos, test bundle pricing to lift margin.
2. **Top-state initiatives** — launch California-specific marketing; run A/B tests for landing pages targeted to CA customers; consider partnerships with local B2B resellers.
3. **Customer retention for top customers** — implement loyalty/priority programs for top 5–10 customers by profit; set up quarterly business reviews for large accounts.
4. **Improve margin-awareness** — some years showed higher profit-growth than sales-growth which suggests opportunity. Analyze product-level margins (promotions vs margins) and reduce discounts on low-margin high-volume items.
5. **Seasonal stock planning** — use monthly trends to align inventory purchases and promotions, avoiding stockouts during high-demand months.
6. **Drill into product-level profitability** — prioritize high-margin products in marketing and assortments; consider discontinuing consistently low-margin SKUs.
7. **Monitor customer acquisition vs retention** — customer_count sheet suggests changes across years; track lifetime value (LTV) of cohorts to justify marketing spend.