Training Instructions by Software Type

SQL (Postgres/SQLite/BigQuery)

Goal: Load data, clean/standardize, produce KPIs (trends, YoY, categories, ROI, growth).

Steps:

1. Create tables and import CSVs (customers, products, orders, order_items, web_sessions, email_campaigns, channel_spend).
2. Standardize region labels and compute Net Revenue (order_total - returned_amount).
3. Calculate monthly revenue and YoY growth.
4. Analyze product category/subcategory revenue.
5. Calculate conversion rates by channel from web_sessions.
6. Join channel_spend and orders to compute ROI by channel.
7. Evaluate region growth (recent 6 months vs prior 6 months).

Excel (Power Query + PivotTables + Charts)

Goal: Quick KPIs, light modeling, printable exec readout.

Steps:

1. Open Portfolio_Starter.xlsx or import CSVs via Power Query.
2. Clean region labels, handle nulls, and add Net Revenue field.
3. Create a Date table for analysis.
4. Build PivotTables:
   - Monthly trends (Net Revenue)
   - YoY growth helper
   - Category/Subcategory revenue
   - Channel conversion and ROI
5. Add charts: Trend lines, bar charts for categories and ROI, KPI cards.
6. Document cleaning steps in a Data Notes sheet.

Tableau

Goal: Build interactive exec dashboards with KPIs, trends, drilldowns.

Steps:

1. Connect to CSVs or Portfolio_Starter.xlsx.
2. Relate tables (orders, products, sessions, spend).
3. Create calculated fields (Net Revenue, Month, YoY %, Conversion %, ROI).
4. Build sheets:

- KPI dashboard (Revenue, Orders, AOV, Return %, Conversion %)
- Trends (Monthly revenue, YoY)
- Channels (Conversion %, ROI)
- Products (Category/Subcategory revenue)
- Regions (Revenue and growth map)

5. Assemble dashboard with slicers (Year, Region, Channel, Category).

Power BI

Goal: Similar to Tableau but with DAX and semantic model.

Steps:

1. Load CSVs into Power BI.
2. Build relationships between tables and create a Date table.
3. Write DAX measures for Net Revenue, Orders, AOV, Return %, Conversion %, YoY %, ROI.
4. Create visuals:
   - KPI Cards
   - Line chart (Revenue + YoY)
   - Bar charts (Conversion %, ROI by channel, Category revenue)
   - Map (Region growth)
5. Add slicers (Year, Region, Channel, Category).
6. Format and publish.

GitHub / Portfolio Site

Goal: Showcase work publicly with reproducible steps.

Steps:

1. Organize repo structure:
   - /data (CSVs)
   - /analysis (SQL)
   - /workbooks (Excel)
   - /docs (Summary, insights)
2. Write README with:
   - Project overview (READY framework)
   - Data schema diagram
   - Steps to reproduce analysis
   - Screenshots of dashboards
   - Key business insights and recommendations

Word / Slide Deck

Goal: Deliver a narrative report and exec readout.

Steps:

1. Use Word to create a report (Business_Insights.docx already provided).
2. Include executive summary, KPIs, trends, channel/product/region insights, and recommendations.
3. Optional: Build a PowerPoint deck outline:
   - Slide 1: Title + KPIs
   - Slide 2: Revenue Trends & Seasonality
   - Slide 3: Channel Performance
   - Slide 4: Product Performance
   - Slide 5: Regional Growth
   - Slide 6: Recommendations & Action Plan