End-to-End Analytics Workflow

Attribute	1. Exploration	2. Warehousing	3. Modeling	4. Analysis (EDA)	5. Business Intelligence
Purpose	Profile raw data, understand structures (ERD), and form initial hypotheses.	Ingest and centralize data into a scalable cloud platform for a single source of truth.	Clean, join, and engineer new metrics (e.g., `implied_cost`) to create a reusable data model.	Validate hypotheses, analyze distributions, find correlations, and uncover complex patterns.	Translate validated insights into interactive dashboards for KPI monitoring and business use.
Our Tools	DBeaver & SQL Server	Google BigQuery (Storage)	Google BigQuery (SQL Views)	Python (Colab, Pandas)	Google Looker Studio
Key Activities	• Data Profiling • ERD Sketching • Basic SELECTs	• Data Loading (ETL) • Schema Definition • Access Control	• JOINing tables • Filtering data • Creating derived columns • Defining VIEWS	• Distribution plots • Correlation matrices • Statistical tests	• Building charts • Creating filters • Defining KPI scorecards
Profitability View	See raw `sales`, `profit` columns.	Aggregate raw totals across the entire dataset.	Create `revenue_after_discount`. Analyze true profit margin.	Visualize profit distribution. Identify outliers.	KPIs: Total Revenue, Total Profit, Avg. Profit Margin.
Customer View	Identify `customer_id` per order.	Count total orders per customer across all data.	Group by `customer_segment` using the master view.	Test for significant profit differences between segments.	Chart: "Profit by Customer Segment".
Product View	See raw sales per `product_code`.	Aggregate total sales for a product over all time.	Create `implied_cost_per_unit`. Analyze true profitability.	Plot `cost vs. time` to visualize volatility.	Dashboard: "Product Performance" with filters.