SQL Prompt Pack for Data Analysts

SQL Queries • Debugging • KPI Definitions • Dashboards • Data Cleaning

Always test AI-generated SQL on sample data before using it in production dashboards, reports, or business decisions.

SQL Query Generation

Prompt 1

```
Write a SQL query for this business question: [question]. Database:
[PostgreSQL/MySQL/BigQuery/Snowflake]. Schema: [paste schema].
```

Prompt 2

```
Create a SQL query that calculates [metric] by [dimension] over [date range]. Include clear column
aliases.
```

Prompt 3

```
Write a SQL query using CTEs to analyze [business process]. Explain each CTE briefly.
```

Prompt 4

```
Write a query to compare this month vs last month for [metric]. Include percentage change.
```

Prompt 5

```
Create a SQL query to find top 10 [customers/products/pages] by [metric] with filters: [filters].
```

Debugging SQL

Prompt 6

```
Find the problem in this SQL query. Error: [paste error]. Query: [paste SQL]. Return corrected query and
explanation.
```

Prompt 7

```
This query returns too many rows. Review the joins and explain where duplication may happen: [paste SQL].
```

Prompt 8

```
This query returns null values unexpectedly. Find likely causes and suggest fixes: [paste SQL].
```

Prompt 9

```
Review this SQL query for syntax errors for [database type]: [paste SQL].
```

Prompt 10

```
Explain why this aggregation may be wrong and how to fix it: [paste SQL].
```

Query Optimization

Prompt 11

```
Review this SQL query for performance improvements. Suggest better filters, joins, indexes, and CTE
changes: [paste SQL].
```

Prompt 12

```
Rewrite this query to be simpler and easier to maintain: [paste SQL].
```

Prompt 13

Suggest indexing ideas for this query and schema: [paste query and schema].

Prompt 14

Optimize this BigQuery/Snowflake query for lower compute cost: [paste SQL].

Prompt 15

Identify calculations that should happen before vs after aggregation in this query: [paste SQL].

KPI Definitions

Prompt 16

Define KPI metrics for [business area]. Include name, definition, formula, SQL logic, and common mistakes.

Prompt 17

Create a KPI dictionary for ecommerce revenue reporting. Include gross revenue, net revenue, AOV, conversion rate, refund rate.

Prompt 18

Create a KPI dictionary for SaaS reporting. Include MRR, ARR, churn, expansion, activation, retention.

Prompt 19

Create KPI definitions for marketing dashboards. Include leads, CPL, CAC, ROAS, conversion rate, pipeline.

Prompt 20

Turn this vague metric request into a precise KPI definition: [paste request].

Dashboard Planning

Prompt 21

Create a dashboard plan for [team]. Include KPIs, chart types, filters, drilldowns, warning metrics, and data sources.

Prompt 22

Suggest a Power BI dashboard layout for [business question]. Include pages, visuals, and key filters.

Prompt 23

Suggest a Tableau dashboard layout for [audience]. Focus on visual storytelling and executive readability.

Prompt 24

Create a Looker Studio report plan for marketing performance using GA4, Search Console, and ad data.

Prompt 25

Review this dashboard plan and suggest missing metrics or confusing visuals: [paste plan].

Data Cleaning

Prompt 26

Create a data cleaning checklist for this dataset. Columns: [paste columns]. Known issues: [paste issues].

Prompt 27

Write SQL checks for duplicates, missing values, invalid dates, negative amounts, and outliers for [table].

Prompt 28

Suggest validation rules for customer data with fields: [fields].

Prompt 29

Create a data quality report query for [table]. Include row count, null count, duplicates, and invalid values.

Prompt 30

Explain how to clean inconsistent category values in [column] and provide SQL examples.

Cohort and Retention

Prompt 31

Write a SQL query for monthly customer cohorts based on first purchase date. Return retention by month.

Prompt 32

Create a query to calculate user retention after 7, 30, and 90 days from signup.

Prompt 33

Explain cohort analysis in plain English for a non-technical manager.

Prompt 34

Create a dashboard plan for retention analysis by acquisition channel.

Prompt 35

Review this cohort query for logic errors: [paste SQL].

Revenue and Finance Analysis

Prompt 36

Write a SQL query for monthly revenue, order count, AOV, refunds, and net revenue by product category.

Prompt 37

Create a query to calculate MRR from subscription events. Include upgrades, downgrades, cancellations, and new revenue.

Prompt 38

Create a finance dashboard KPI plan for revenue, gross margin, expenses, cash flow, and forecast accuracy.

Prompt 39

Explain why gross revenue and net revenue may differ in ecommerce reporting.

Prompt 40

Create SQL logic to identify customers with declining purchase frequency.

Segmentation

Prompt 41

Create customer segments based on recency, frequency, and monetary value using SQL.

Prompt 42

Write a SQL query to group users by acquisition channel and lifetime value.

Prompt 43

Suggest 8 useful segments for an ecommerce email marketing dashboard.

Prompt 44

```
Create a query to identify high-value customers who have not purchased in 90 days.
```

Prompt 45

```
Explain how to avoid overlapping customer segments in reporting.
```

Executive Summaries

Prompt 46

```
Turn these dashboard metrics into a short executive summary with insights, risks, and recommended
actions: [paste metrics].
```

Prompt 47

```
Write a plain-English explanation of this SQL result for non-technical stakeholders: [paste result].
```

Prompt 48

```
Create 5 business insights from this data table: [paste table]. Include confidence and caveats.
```

Prompt 49

```
Summarize this report for a weekly leadership meeting. Keep it under 150 words: [paste report].
```

Prompt 50

```
Create a decision memo based on these analytics findings: [paste findings].
```

Final note

Review and adapt every item before using it in real business, classroom, legal, hiring, or analytics workflows.