

A decorative network diagram in the top-left corner, featuring a complex web of interconnected nodes and lines. Some nodes are highlighted with blue circles, and others with blue dots. The lines are thin and grey, creating a mesh-like structure.

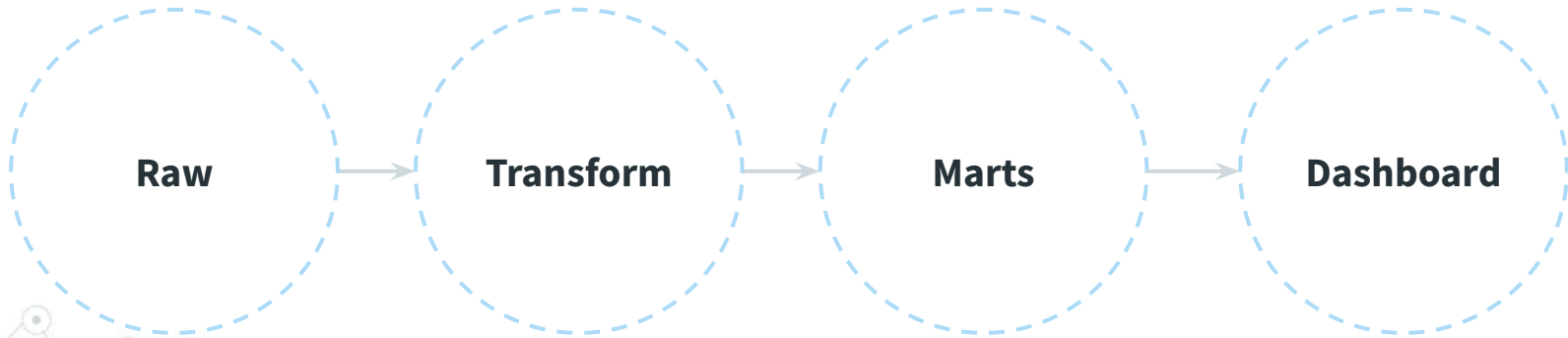
SaaS BI Design

Senior Data Analyst Assignment for Time Doctor
By Itai Raboy

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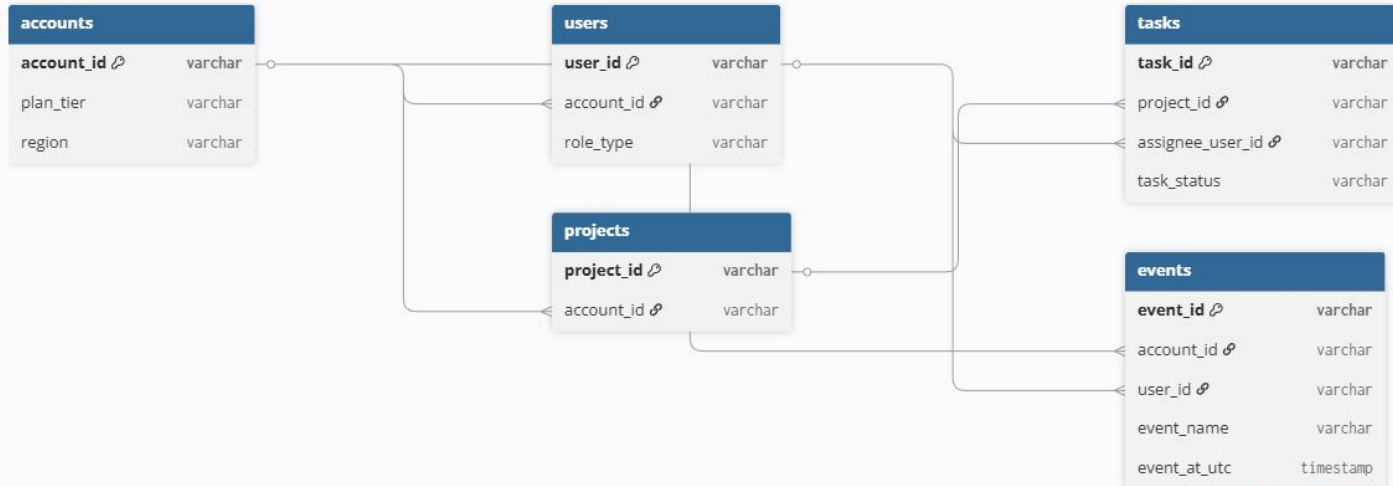
Objective and Scope

- Context: B2B Project Management SaaS
- Goal: Trusted visibility: usage, engagement, productivity
- Out of scope: Employee monitoring, time tracking



Data model

- Core principle: Realistic with controlled imperfections
- Supports metrics at weekly grain



Transformations and KPIs

◎ Layered SQL: Staging → Intermediate → Marts

KPI	Why it matters	Limitation
WAU	Adoption	Calendar-week logic
W+4 Retention	Stickiness	Strict; Recent cohorts = N/A
Throughput	Value realization	Backlog effects
Cycle Time	Friction	Task mix bias
On-time completion	Reliability	Depends on customer definition
Late event rate	Data trust	-


Dashboard design

- Page 1: Executive Overview
- Page 2: Engagement & Retention
- Page 3: Productivity & Trust





QA & Production

- ◎ Guardrails: nulls, anomaly checks, schema drift, lag
 - ◎ Next steps: tests/contracts, orchestration, alerting
 - ◎ In the future: forecasting, advanced ML
- 

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