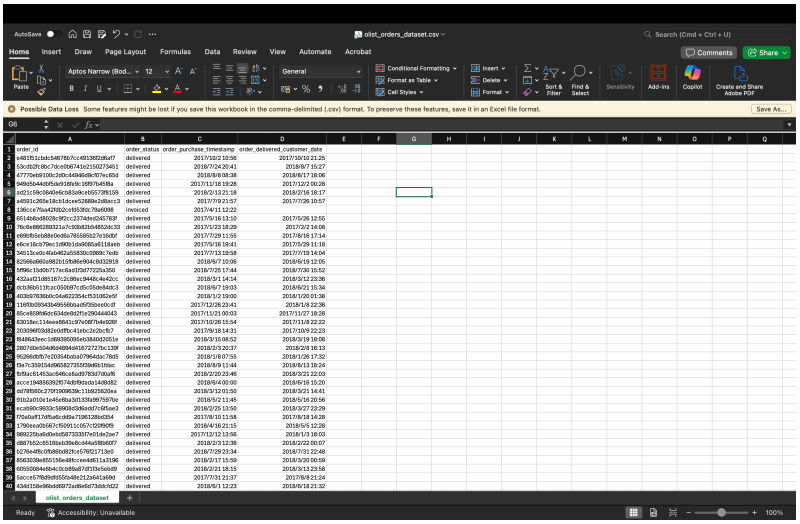
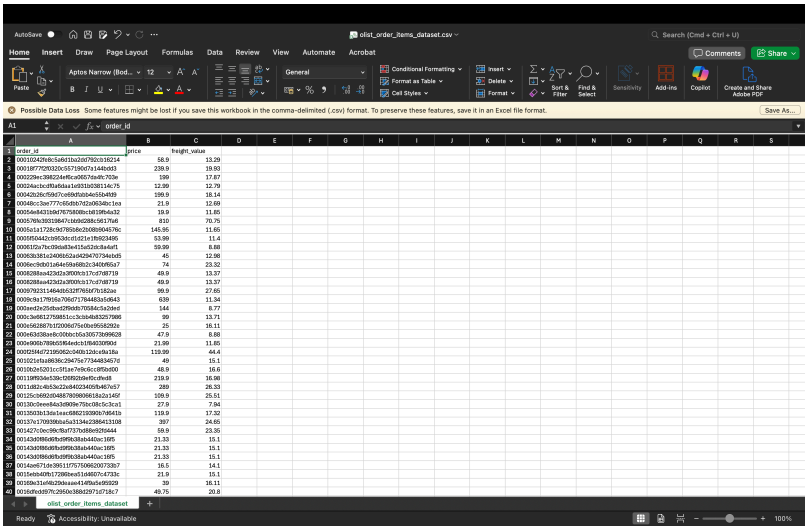
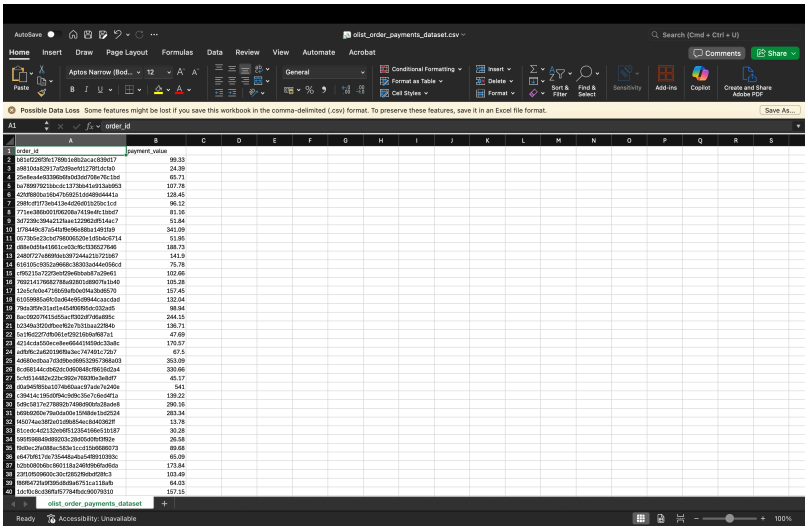
Raw E-commerce Data

(Orders, Items, Payments)







Daily KPI Builder (Python Script)

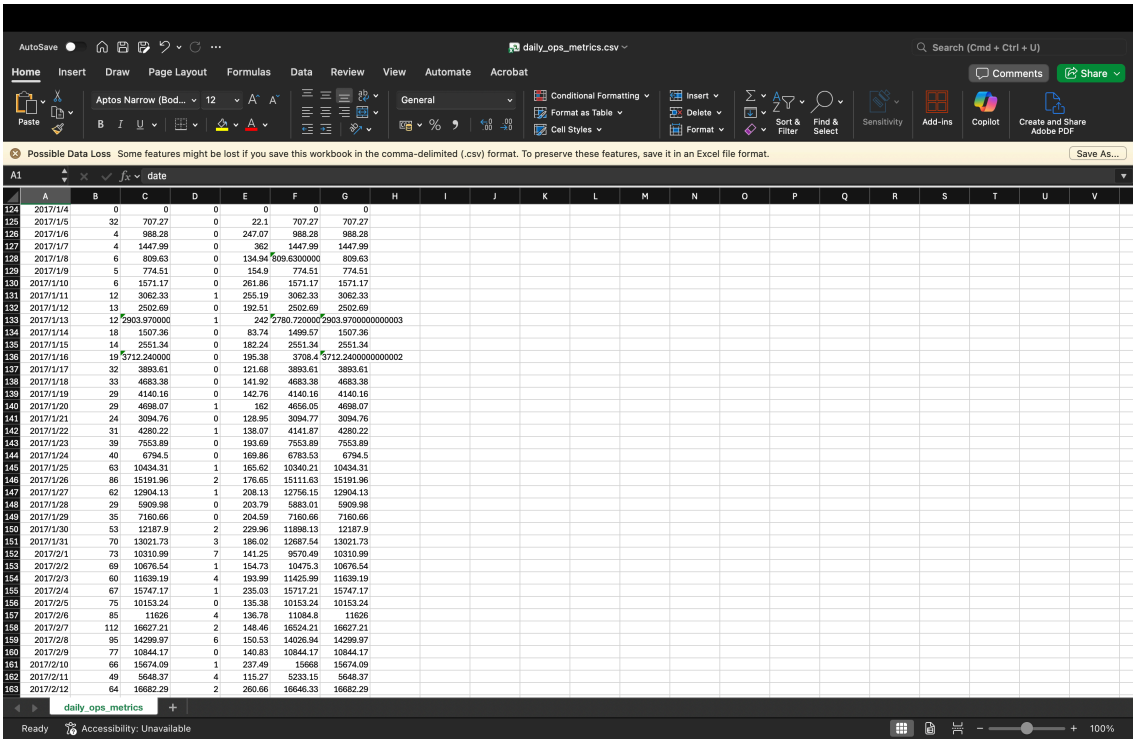
build_daily_kpi.py

```python
import os
import pandas as pd

# ========================
# 0) Path config
# ========================
BASE_DIR = os.path.dirname(os.path.abspath(__file__))

ORDERS_FILE   = os.path.join(BASE_DIR, "olist_orders_dataset.csv")
ITEMS_FILE    = os.path.join(BASE_DIR, "olist_order_items_dataset.csv")
PAYMENTS_FILE = os.path.join(BASE_DIR, "olist_order_payments_dataset.csv")  # optional

# Output (production-friendly names)
OUT_CSV  = os.path.join(BASE_DIR, "daily_ops_metrics.csv")
OUT_XLSX = os.path.join(BASE_DIR, "daily_ops_metrics.xlsx")

# ========================
# 1) Load orders (minimal cols)
# ========================
if not os.path.exists(ORDERS_FILE):
    raise FileNotFoundError(f"Missing: {ORDERS_FILE}")

orders = pd.read_csv(
    ORDERS_FILE,
    usecols=[
        "order_id",
        "order_status",
        "order_purchase_timestamp",
        "order_delivered_customer_date",
    ],
)

orders["order_purchase_timestamp"] = pd.to_datetime(
    orders["order_purchase_timestamp"], errors="coerce"
)
orders["purchase_date"] = orders["order_purchase_timestamp"].dt.date

# Use full available range (simulation mode B needs full history)
orders = orders.dropna(subset=["order_purchase_timestamp"]).copy()
if orders.empty:
    raise ValueError("No valid order_purchase_timestamp after parsing.")

min_ts = orders["order_purchase_timestamp"].min()
max_ts = orders["order_purchase_timestamp"].max()
print(f"Data coverage (orders): {min_ts} ~> {max_ts}")

# ========================
# 2) Load items (minimal cols) and join to orders
# ========================
if not os.path.exists(ITEMS_FILE):
    raise FileNotFoundError(f"Missing: {ITEMS_FILE}")

items = pd.read_csv(
    ITEMS_FILE,
    usecols=["order_id", "price", "freight_value"],
)

# Keep only items that belong to orders we have
items = items.merge(
```

Ln: 1 Col: 0

Daily Operations Metrics

(Daily KPI Table)



daily_ops_metrics.csv

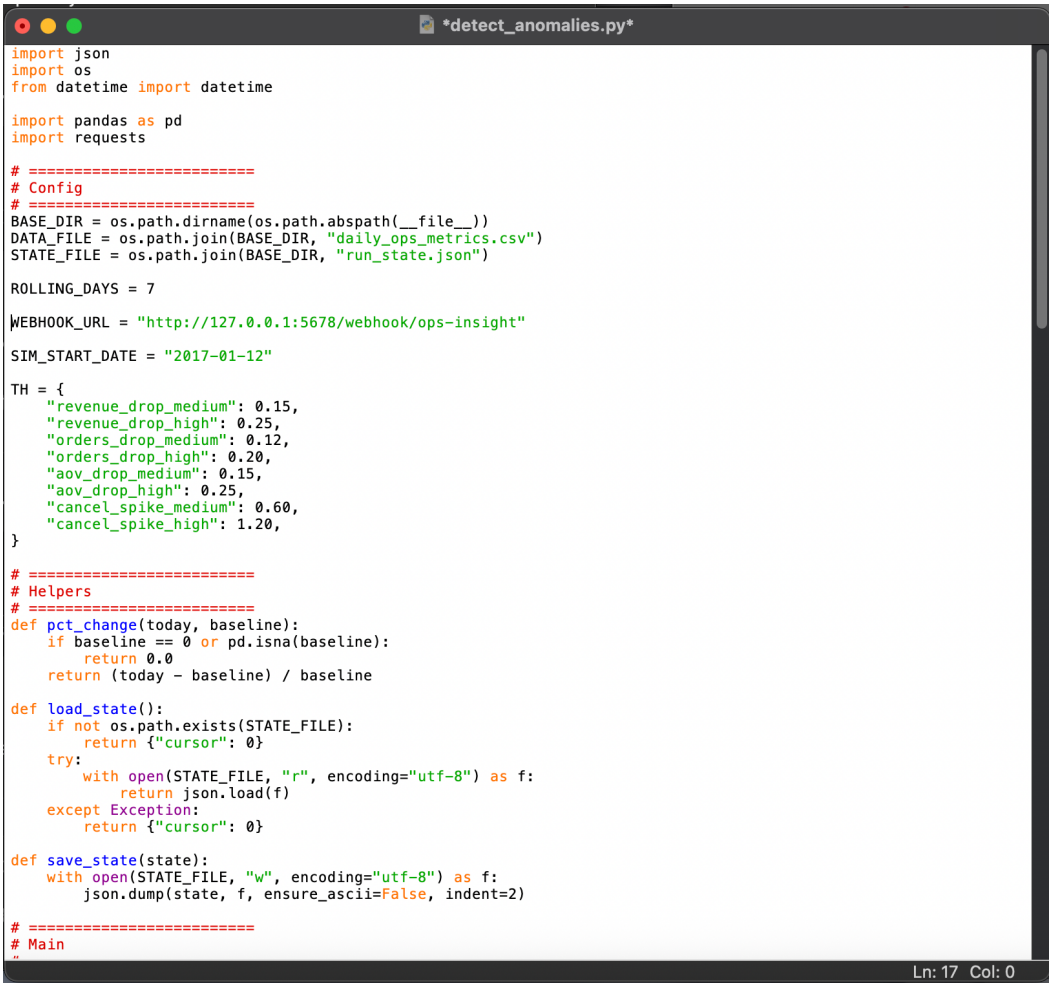
	A	B	C	D	E	F	G
124	2017/1/4	0	0	0	0	0	0
125	2017/1/5	32	707.27	0	22.1	707.27	707.27
126	2017/1/6	4	988.28	0	247.07	988.28	988.28
127	2017/1/7	4	1447.99	0	362	1447.99	1447.99
128	2017/1/8	6	809.63	0	134.94	809.6300000	809.63
129	2017/1/9	5	774.51	0	154.9	774.51	774.51
130	2017/1/10	6	1571.17	0	261.86	1571.17	1571.17
131	2017/1/11	12	3062.33	1	255.19	3062.33	3062.33
132	2017/1/12	13	2502.69	0	192.51	2502.69	2502.69
133	2017/1/13	12	2903.970000	1	242	2780.720000	2903.9700000000003
134	2017/1/14	18	1507.36	0	83.74	1499.57	1507.36
135	2017/1/15	14	2551.34	0	182.24	2551.34	2551.34
136	2017/1/16	19	3712.240000	0	195.38	3708.4	3712.2400000000002
137	2017/1/17	32	3893.61	0	121.68	3893.61	3893.61
138	2017/1/18	33	4683.38	0	141.92	4683.38	4683.38
139	2017/1/19	29	4140.16	0	142.76	4140.16	4140.16
140	2017/1/20	29	4698.07	1	162	4656.05	4698.07
141	2017/1/21	24	3094.76	0	128.95	3094.77	3094.76
142	2017/1/22	31	4280.22	1	138.07	4141.87	4280.22
143	2017/1/23	39	7553.89	0	193.69	7553.89	7553.89
144	2017/1/24	40	6794.5	0	169.86	6783.53	6794.5
145	2017/1/25	63	10434.31	1	165.62	10340.21	10434.31
146	2017/1/26	86	15191.96	2	176.65	15111.63	15191.96
147	2017/1/27	62	12904.13	1	208.13	12756.15	12904.13
148	2017/1/28	29	5909.98	0	203.79	5883.01	5909.98
149	2017/1/29	35	7160.66	0	204.59	7160.66	7160.66
150	2017/1/30	53	12187.9	2	229.96	11898.13	12187.9
151	2017/1/31	70	13021.73	3	186.02	12687.54	13021.73
152	2017/2/1	73	10310.99	7	141.25	9570.49	10310.99
153	2017/2/2	69	10676.54	1	154.73	10475.3	10676.54
154	2017/2/3	60	11639.19	4	193.99	11425.99	11639.19
155	2017/2/4	67	15747.17	1	235.03	15717.21	15747.17
156	2017/2/5	75	10153.24	0	135.38	10153.24	10153.24
157	2017/2/6	85	11626	4	136.78	11084.8	11626
158	2017/2/7	112	16627.21	2	148.46	16524.21	16627.21
159	2017/2/8	95	14299.97	6	150.53	14026.94	14299.97
160	2017/2/9	77	10844.17	0	140.83	10844.17	10844.17
161	2017/2/10	66	15674.09	1	237.49	15668	15674.09
162	2017/2/11	49	5648.37	4	115.27	5233.15	5648.37
163	2017/2/12	64	16682.29	2	260.66	16646.33	16682.29

daily_ops_metrics

Ready Accessibility: Unavailable 100%

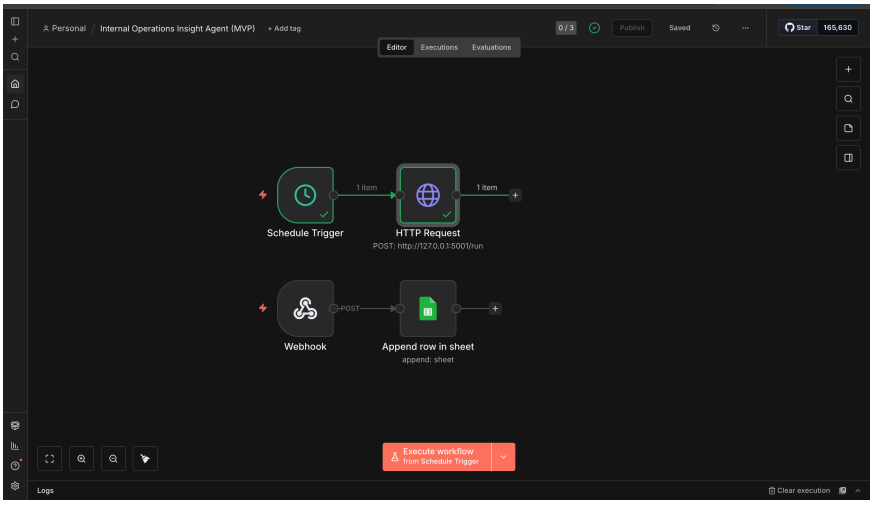
Anomaly Detection

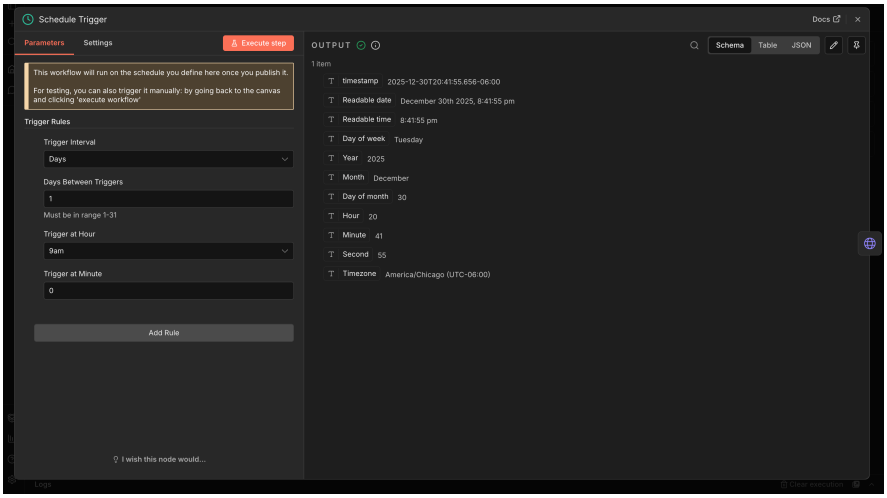
(7-Day Rolling Baseline)

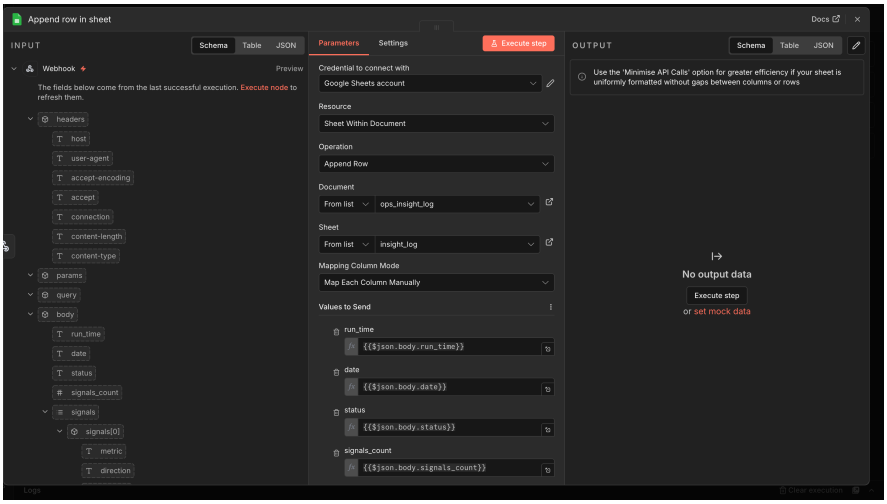


Workflow Automation

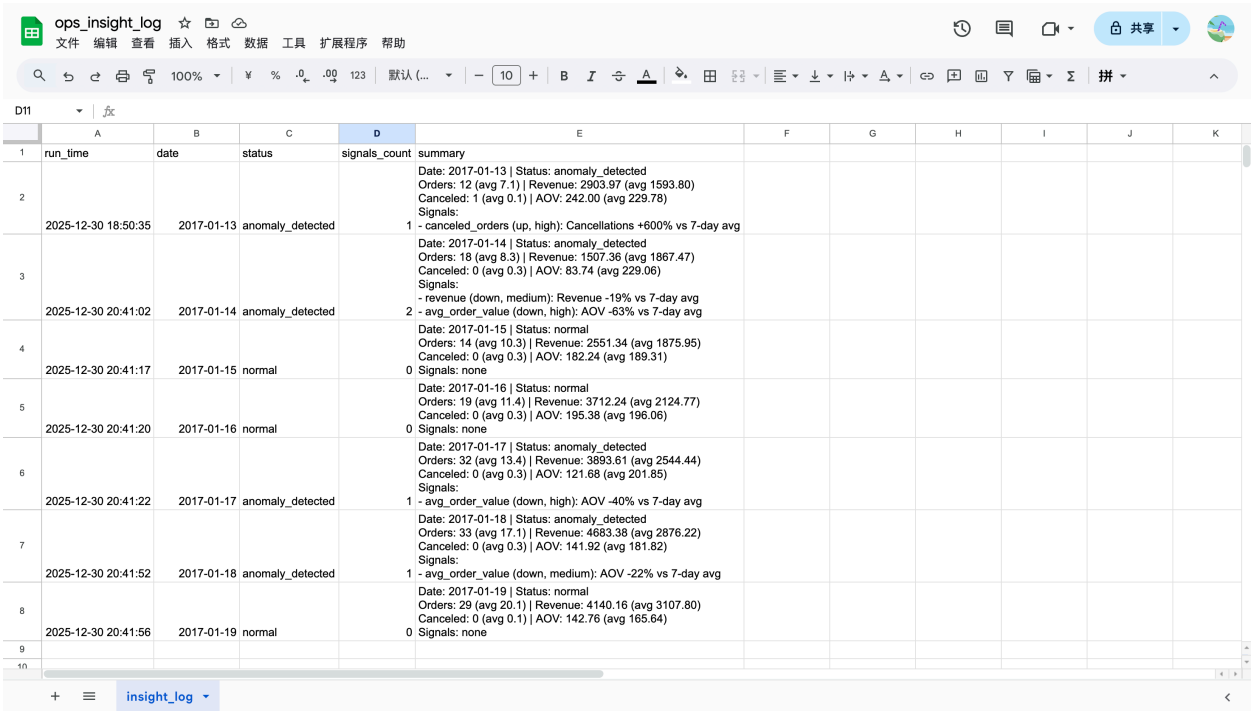
(n8n Scheduler)







Google Sheets Dashboard



	A	B	C	D	E	F	G	H	I	J	K
1	run_time	date	status	signals_count	summary						
2	2025-12-30 18:50:35	2017-01-13	anomaly_detected	1	Date: 2017-01-13 | Status: anomaly_detected Orders: 12 (avg 7.1) | Revenue: 2903.97 (avg 1593.80) Canceled: 1 (avg 0.1) | AOV: 242.00 (avg 229.78) Signals: - canceled_orders (up, high): Cancellations +600% vs 7-day avg						
3	2025-12-30 20:41:02	2017-01-14	anomaly_detected	2	Date: 2017-01-14 | Status: anomaly_detected Orders: 18 (avg 8.3) | Revenue: 1507.36 (avg 1867.47) Canceled: 0 (avg 0.3) | AOV: 83.74 (avg 229.06) Signals: - revenue (down, medium): Revenue -19% vs 7-day avg - avg_order_value (down, high): AOV -63% vs 7-day avg						
4	2025-12-30 20:41:17	2017-01-15	normal	0	Date: 2017-01-15 | Status: normal Orders: 14 (avg 10.3) | Revenue: 2551.34 (avg 1875.95) Canceled: 0 (avg 0.3) | AOV: 182.24 (avg 189.31) Signals: none						
5	2025-12-30 20:41:20	2017-01-16	normal	0	Date: 2017-01-16 | Status: normal Orders: 19 (avg 11.4) | Revenue: 3712.24 (avg 2124.77) Canceled: 0 (avg 0.3) | AOV: 195.38 (avg 196.06) Signals: none						
6	2025-12-30 20:41:22	2017-01-17	anomaly_detected	1	Date: 2017-01-17 | Status: anomaly_detected Orders: 32 (avg 13.4) | Revenue: 3893.61 (avg 2544.44) Canceled: 0 (avg 0.3) | AOV: 121.68 (avg 201.85) Signals: - avg_order_value (down, high): AOV -40% vs 7-day avg						
7	2025-12-30 20:41:52	2017-01-18	anomaly_detected	1	Date: 2017-01-18 | Status: anomaly_detected Orders: 33 (avg 17.1) | Revenue: 4683.38 (avg 2876.22) Canceled: 0 (avg 0.3) | AOV: 141.92 (avg 181.82) Signals: - avg_order_value (down, medium): AOV -22% vs 7-day avg						
8	2025-12-30 20:41:56	2017-01-19	normal	0	Date: 2017-01-19 | Status: normal Orders: 29 (avg 20.1) | Revenue: 4140.16 (avg 3107.80) Canceled: 0 (avg 0.1) | AOV: 142.76 (avg 165.64) Signals: none						
9											
10											