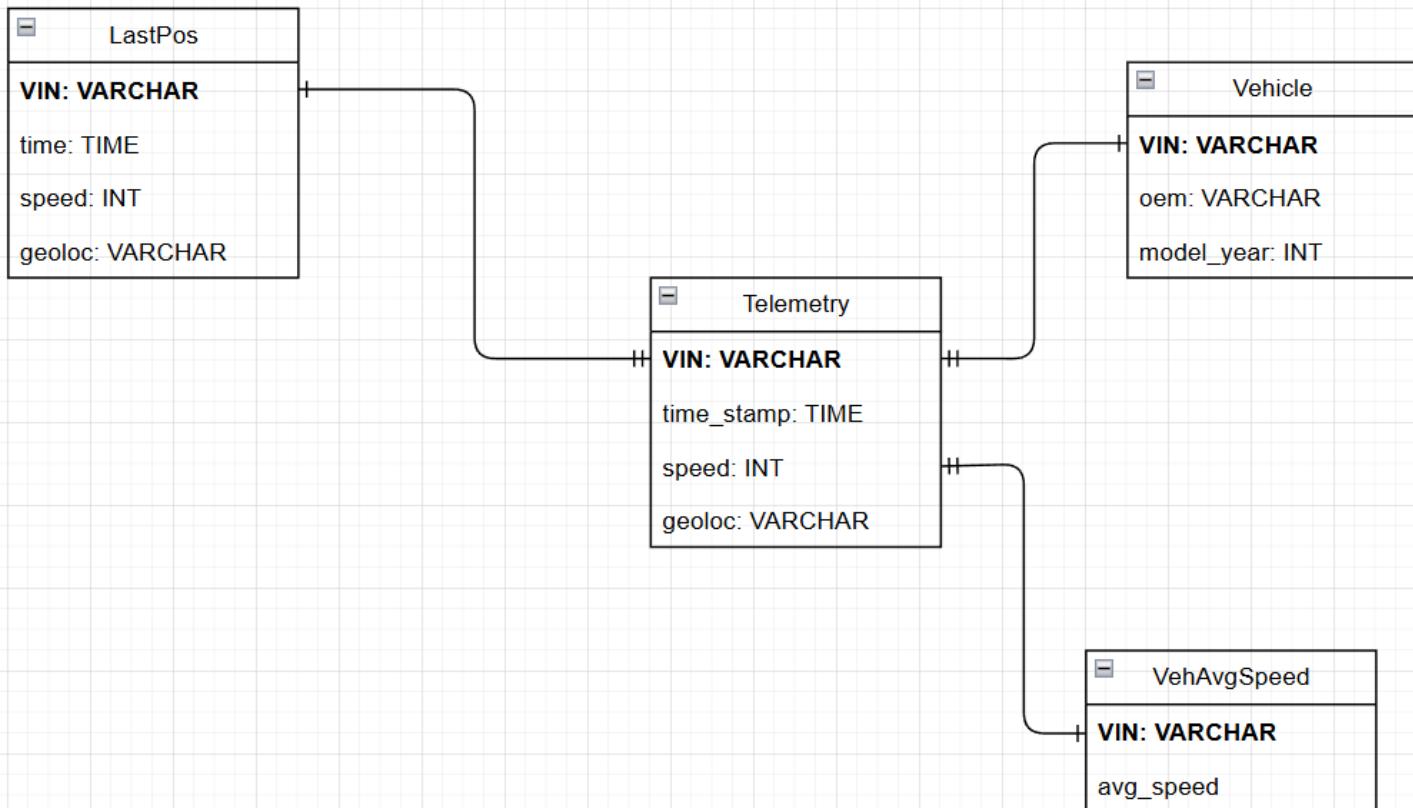


Proyecto Integrador

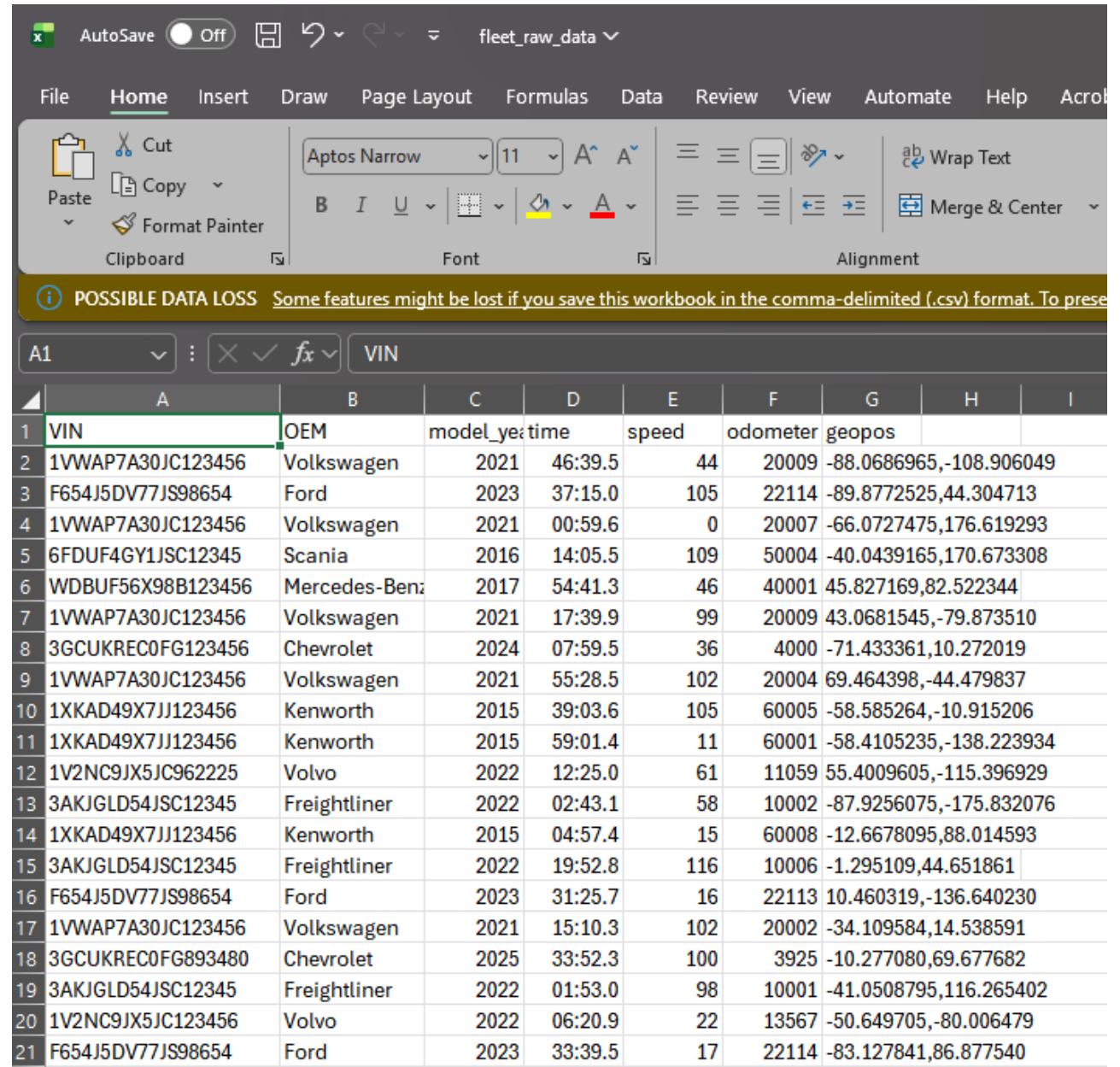
Enrique Rodríguez Toscano

Vehicle fleet Simple Worflow (12 Vehicle fleet)

DBC Design



Synthetic Raw Data generated



The screenshot shows a Microsoft Excel spreadsheet titled "fleet_raw_data". The data is presented in a table with the following columns:

A	B	C	D	E	F	G	H	I
VIN	OEM	model_year	time	speed	odometer	geopos		
1VWAP7A30JC123456	Volkswagen	2021	46:39.5	44	20009	-88.0686965,-108.906049		
F654J5DV77JS98654	Ford	2023	37:15.0	105	22114	-89.8772525,44.304713		
1VWAP7A30JC123456	Volkswagen	2021	00:59.6	0	20007	-66.0727475,176.619293		
6FDUF4GY1JSC12345	Scania	2016	14:05.5	109	50004	-40.0439165,170.673308		
WDBUF56X98B123456	Mercedes-Benz	2017	54:41.3	46	40001	45.827169,82.522344		
1VWAP7A30JC123456	Volkswagen	2021	17:39.9	99	20009	43.0681545,-79.873510		
3GCUKREC0FG123456	Chevrolet	2024	07:59.5	36	4000	-71.433361,10.272019		
1VWAP7A30JC123456	Volkswagen	2021	55:28.5	102	20004	69.464398,-44.479837		
1XKAD49X7JJ123456	Kenworth	2015	39:03.6	105	60005	-58.585264,-10.915206		
1XKAD49X7JJ123456	Kenworth	2015	59:01.4	11	60001	-58.4105235,-138.223934		
1V2NC9JX5JC962225	Volvo	2022	12:25.0	61	11059	55.4009605,-115.396929		
3AKJGLD54JSC12345	Freightliner	2022	02:43.1	58	10002	-87.9256075,-175.832076		
1XKAD49X7JJ123456	Kenworth	2015	04:57.4	15	60008	-12.6678095,88.014593		
3AKJGLD54JSC12345	Freightliner	2022	19:52.8	116	10006	-1.295109,44.651861		
F654J5DV77JS98654	Ford	2023	31:25.7	16	22113	10.460319,-136.640230		
1VWAP7A30JC123456	Volkswagen	2021	15:10.3	102	20002	-34.109584,14.538591		
3GCUKREC0FG893480	Chevrolet	2025	33:52.3	100	3925	-10.277080,69.677682		
3AKJGLD54JSC12345	Freightliner	2022	01:53.0	98	10001	-41.0508795,116.265402		
1V2NC9JX5JC123456	Volvo	2022	06:20.9	22	13567	-50.649705,-80.006479		
F654J5DV77JS98654	Ford	2023	33:39.5	17	22114	-83.127841,86.877540		

Docker up and running

The screenshot shows the Docker Desktop interface with the title bar "docker desktop PERSONAL". On the left is a sidebar with "Ask Gordon BETA", "Containers" (selected), "Images", "Volumes", "Builds", "Models", "MCP Toolkit BETA", "Docker Hub", and "Docker Scout". Below that is an "Extensions" section. The main area is titled "Containers Give feedback" and displays container usage statistics: "Container CPU usage 8.48% / 1200% (12 CPUs available)" and "Container memory usage 3.09GB / 8.44GB". A search bar and a "Show charts" link are at the top right. A "Only show running containers" toggle is also present. The table lists 10 running containers:

	Name	Container ID	Image	Port(s)	CPU (%)	Last started	Actions
<input type="checkbox"/>	pensive_cerf	13304224457f	hello-world		0%	2 months ago	▶ ⋮ trash
<input type="checkbox"/>	vigilant_gagarin	a3c5f0d4395c	hola-docker.js		0%	2 months ago	▶ ⋮ trash
<input type="checkbox"/>	work	-	-		8.48%	2 minutes ago	▶ ⋮ trash
<input type="checkbox"/>	redis-1	38b13383629c	redis:7.2-bookworm		0.22%	2 minutes ago	▶ ⋮ trash
<input type="checkbox"/>	postgres-1	c329e04835e5	postgres:13	5433:5432 ↗	2.28%	2 minutes ago	▶ ⋮ trash
<input type="checkbox"/>	airflow-init-1	2af259515509	work-airflow-init		0%	2 minutes ago	▶ ⋮ trash
<input type="checkbox"/>	airflow-scheduler-1	6b57e8f357f6	work-airflow-scheduler		4.52%	2 minutes ago	▶ ⋮ trash
<input type="checkbox"/>	airflow-webserver-1	2e4714828c91	work-airflow-webserver	8080:8080 ↗	0.17%	2 minutes ago	▶ ⋮ trash
<input type="checkbox"/>	airflow-worker-1	d86a6ff721a3	work-airflow-worker		0.09%	2 minutes ago	▶ ⋮ trash
<input type="checkbox"/>	airflow-triggerer-1	1fac4df9a700	work-airflow-triggerer		1.2%	2 minutes ago	▶ ⋮ trash

Showing 10 items

Walkthroughs [X](#)

Docker up and running

Raw Schema creation and raw data import

```
airflow=# dt\  
invalid command \  
Try \? for help.  
airflow# \dt  
airflow# \dn  
  List of schemas  
   Name    | Owner  
-----+-----  
driven_raw | airflow  
driven_staging | airflow  
driven_trusted | airflow  
public      | airflow  
(4 rows)
```

```
airflow=# DROP TABLE driven_raw.raw_batch_data ;  
DROP TABLE  
airflow# \dt driven_raw.*  
  List of relations  
   Schema |     Name      | Type | Owner  
-----+-----+-----+-----  
driven_raw | raw_batch_data | table | airflow  
(1 row)
```

```
airflow# SELECT * FROM driven_raw.raw_batch_data limit 20;  
   vin    |   oem   | model_year |           time        | speed | odometer |      geopos  
-----+-----+-----+-----+-----+-----+-----+  
1VWAP7A30JC123456 | Volkswagen | 2021 | 2025-11-28 17:46:39.508461 | 44 | 20009 | -88.0686965,-108.906049  
F654J5DV77JS98654 | Ford       | 2023 | 2025-11-28 20:37:15.007511 | 105 | 22114 | -89.8772525,44.304713  
1VWAP7A30JC123456 | Volkswagen | 2021 | 2025-11-28 21:00:59.620985 | 0 | 20007 | -66.0727475,176.619293  
6FDUF4GY1JSC12345 | Scania     | 2016 | 2025-11-29 03:14:05.500707 | 109 | 50004 | -40.0439165,170.673308  
WDBUF56X98B123456 | Mercedes-Benz | 2017 | 2025-11-28 22:54:41.271485 | 46 | 40001 | 45.827169,82.522344  
1VWAP7A30JC123456 | Volkswagen | 2021 | 2025-11-28 14:17:39.858323 | 99 | 20009 | 43.0681545,-79.873510  
3GCUKREC0FG123456 | Chevrolet  | 2024 | 2025-11-28 12:07:59.541961 | 36 | 4000 | -71.433361,10.272019  
1VWAP7A30JC123456 | Volkswagen | 2021 | 2025-11-28 18:55:28.499485 | 102 | 20004 | 69.464398,-44.479837  
1XKAD49X7JJ123456 | Kenworth   | 2015 | 2025-11-28 11:39:03.588197 | 105 | 60005 | -58.585264,-10.915206  
1XKAD49X7JJ123456 | Kenworth   | 2015 | 2025-11-28 07:59:01.391861 | 11 | 60001 | -58.4105235,-138.223934  
1V2NC9JX5JC962225 | Volvo      | 2022 | 2025-11-28 13:12:24.993437 | 61 | 11059 | 55.4009605,-115.396929  
3AKJGLD54JSC12345 | Freightliner | 2022 | 2025-11-28 19:02:43.074903 | 58 | 10002 | -87.9256075,-175.832076  
1XKAD49X7JJ123456 | Kenworth   | 2015 | 2025-11-28 08:04:57.37322 | 15 | 60008 | -12.6678095,88.014593  
3AKJGLD54JSC12345 | Freightliner | 2022 | 2025-11-28 22:19:52.821633 | 116 | 10006 | -1.295109,44.651861  
F654J5DV77JS98654 | Ford       | 2023 | 2025-11-28 22:31:25.735616 | 16 | 22113 | 10.460319,-136.640230  
1VWAP7A30JC123456 | Volkswagen | 2021 | 2025-11-28 08:15:10.300023 | 102 | 20002 | -34.109584,14.538591  
3GCUKREC0FG893480 | Chevrolet  | 2025 | 2025-11-28 21:33:52.336908 | 100 | 3925 | -10.277080,69.677682  
3AKJGLD54JSC12345 | Freightliner | 2022 | 2025-11-29 01:01:53.048155 | 98 | 10001 | -41.0508795,116.265402  
1V2NC9JX5JC123456 | Volvo      | 2022 | 2025-11-28 06:06:20.928829 | 22 | 13567 | -50.649705,-80.006479  
F654J5DV77JS98654 | Ford       | 2023 | 2025-11-28 09:33:39.464821 | 17 | 22114 | -83.127841,86.877540  
(20 rows)
```

Staging Schema creation and table creation

```
airflow=# \dt driven_staging.*  
      List of relations  
 Schema |     Name      | Type | Owner  
-----+-----+-----+-----+  
driven_staging | dim_address | table | airflow  
driven_staging | dim_date   | table | airflow  
driven_staging | dim_finance | table | airflow  
driven_staging | dim_last_pos | table | airflow  
driven_staging | dim_person  | table | airflow  
driven_staging | dim_telemetry | table | airflow  
driven_staging | dim_veh_avg_speed | table | airflow  
driven_staging | dim_vehicles | table | airflow  
driven_staging | fact_network_usage | table | airflow  
(9 rows)  
  
airflow=#  
  
RAM 8.09 GB CPU 10.82% Disk: 7.55 GB used (limit 1006.85 GB)
```

```
airflow=# SELECT * FROM driven_staging.dim_veh_avg_speed limit 20 ;  
      vin | avg_speed  
-----+-----+  
1V2NC9JX5JC123456 | 59.6040515653775322  
1V2NC9JX5JC962225 | 62.8724832214765101  
3AKJGLD54JSC12345 | 59.0708294501397950  
3GCUKREC0FG893480 | 60.4480874316939891  
1XKAD49X7JJ123456 | 59.6009433962264151  
F654J5DV77JS98654 | 58.9186256781193490  
WDBUF56X98B123456 | 59.7022308438469311  
6FDUF4GY1JSC12345 | 60.1632286995515695  
3GCUKREC0FG123456 | 59.1545538178472861  
LZB12345678901234 | 59.6837865055387714  
1VWAP7A30JC123456 | 61.4031551270815074  
F654J5DV77JS46566 | 61.8665464382326420  
(12 rows)
```

```
airflow=# SELECT * FROM driven_staging.dim_last_pos LIMIT 20;  
      vin |     oem      |           time      |      geopos  
-----+-----+-----+-----+  
1V2NC9JX5JC123456 | Volvo | 2025-12-03 03:52:55.282961 | 47.850364,47.445878  
1V2NC9JX5JC962225 | Volvo | 2025-12-03 04:21:12.847493 | 38.8466925,-53.461134  
1VWAP7A30JC123456 | Volkswagen | 2025-12-03 04:27:42.483603 | -3.9792025,131.287153  
1XKAD49X7JJ123456 | Kenworth | 2025-12-03 04:22:18.382928 | -35.650918,-58.772821  
3AKJGLD54JSC12345 | Freightliner | 2025-12-03 04:13:42.907018 | 56.4041145,-61.153963  
3GCUKREC0FG123456 | Chevrolet | 2025-12-03 04:09:41.051617 | 87.0324565,118.591120  
3GCUKREC0FG893480 | Chevrolet | 2025-12-03 04:20:08.740631 | 34.471792,-165.425157  
6FDUF4GY1JSC12345 | Scania | 2025-12-03 04:24:43.276448 | -1.864793,59.415064  
F654J5DV77JS46566 | Ford | 2025-12-03 03:14:08.523712 | 8.677037,119.675660  
F654J5DV77JS98654 | Ford | 2025-12-03 04:28:21.59087 | 47.4118195,-61.047921  
LZB12345678901234 | FAW | 2025-12-03 04:23:26.574768 | -87.3454665,23.925814  
WDBUF56X98B123456 | Mercedes-Benz | 2025-12-03 04:11:25.587765 | 3.266145,55.275334  
(12 rows)
```

Driven Trusted

```
airflow=# SELECT * FROM driven_trusted.veh_telemetry limit 10;
   vin    |      oem      | model_year | speed | odometer |           time
-----+-----+-----+-----+-----+
1VWAP7A30JC123456 | Volkswagen | 2021 | 44 | 20009 | 2025-11-28 17:46:39.508461
F654J5DV77JS98654 | Ford       | 2023 | 105 | 22114 | 2025-11-28 20:37:15.007511
1VWAP7A30JC123456 | Volkswagen | 2021 | 0 | 20007 | 2025-11-28 21:00:59.620985
6FDUF4GY1JSC12345 | Scania     | 2016 | 109 | 50004 | 2025-11-29 03:14:05.500707
WDBUF56X98B123456 | Mercedes-Benz | 2017 | 46 | 40001 | 2025-11-28 22:54:41.271485
1VWAP7A30JC123456 | Volkswagen | 2021 | 99 | 20009 | 2025-11-28 14:17:39.858323
3GCUKREC0FG123456 | Chevrolet  | 2024 | 36 | 4000 | 2025-11-28 12:07:59.541961
1VWAP7A30JC123456 | Volkswagen | 2021 | 102 | 20004 | 2025-11-28 18:55:28.499485
1XKAD49X7JJ123456 | Kenworth   | 2015 | 105 | 60005 | 2025-11-28 11:39:03.588197
1XKAD49X7JJ123456 | Kenworth   | 2015 | 11 | 60001 | 2025-11-28 07:59:01.391861
(10 rows)
```

```
airflow=# \dt driven_trusted.*
List of relations
 Schema |      Name      | Type | Owner
-----+-----+-----+
driven_trusted | non_pii_data | table | airflow
driven_trusted | payment_data | table | airflow
driven_trusted | pii_data     | table | airflow
driven_trusted | technical_data| table | airflow
driven_trusted | veh_telemetry | table | airflow
(5 rows)
```

Airflow DAG execution

Triggered Vehicle_Fleet_raw_data_pipeline with new Run ID manual_2025-12-02T04:29:32.138231+00:00, it should start any moment now.

DAG: Vehicle_Fleet_raw_data_pipeline DataDriven Main Pipeline.

Schedule: * * * * * | Next Run ID: 2025-12-01, 01:59:00 -06 | [▶](#) [🔗](#) [✖](#)

12/01/2025 10:29:32 PM | All Run Types | All Run States | [Clear Filters](#)

Auto-refresh 25

Press `shift + /` for Shortcuts

Duration: Nov 28, 01:59 - Nov 29, 01:59 - Dec 01, 01:59

extract_raw_data, create_raw_schema, create_raw_table, load_raw_data, run_dbt_staging, run_dbt_trusted

Deferred Failed Queued Removed Restarting Running Scheduled Shutdown Skipped Success Up_for_reschedule Up_for_retry Upstream_failed No_status

DAG: Vehicle_Fleet_raw_data_pipeline / Run: 2025-12-01, 01:58:00 -06

[Details](#) [Graph](#) [Gantt](#) [Code](#) [Event Log](#) [Clear](#) [Mark state as...](#)

DAG Run Notes [Add Note](#)

Dag Run Details

Status	success
Run ID	manual_2025-12-02T04:29:32.138231+00:00 🔗
Run type	▶ manual
Run duration	00:00:17
Last scheduling decision	2025-12-01, 22:29:50 -06
Queued at	2025-12-01, 22:29:32 -06
Started	2025-12-01, 22:29:32 -06
Ended	2025-12-01, 22:29:50 -06
Data interval start	2025-12-01, 01:58:00 -06
Data interval end	2025-12-01, 01:59:00 -06