

The background of the slide is a blurred image of a document. It features a line graph with a blue line and several data points. A silver pen is visible in the upper right corner, resting on the document. The overall color scheme is light blue and white.

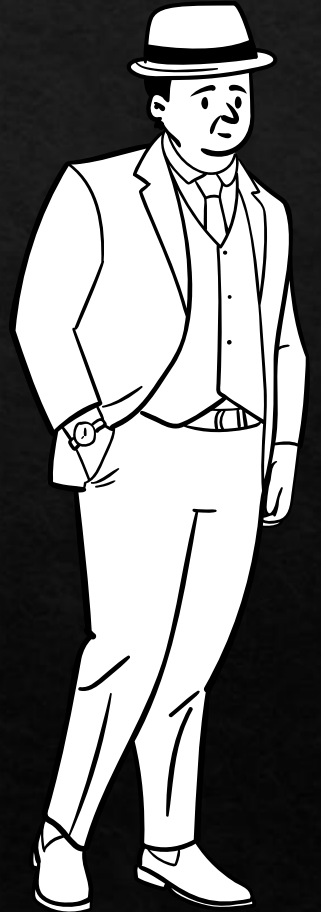
# Análisis de resultados de F1

Óscar Lestón Casais

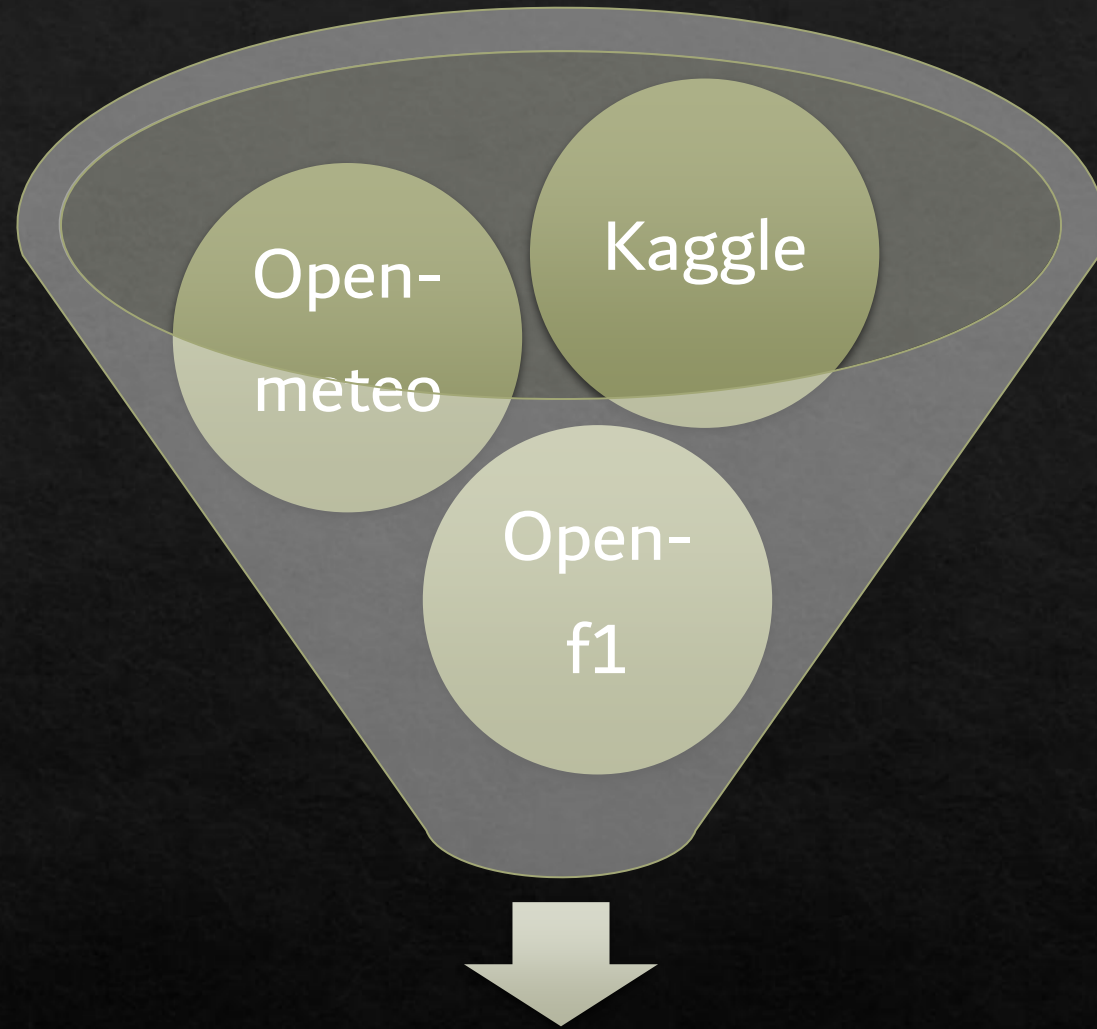
# Contenido



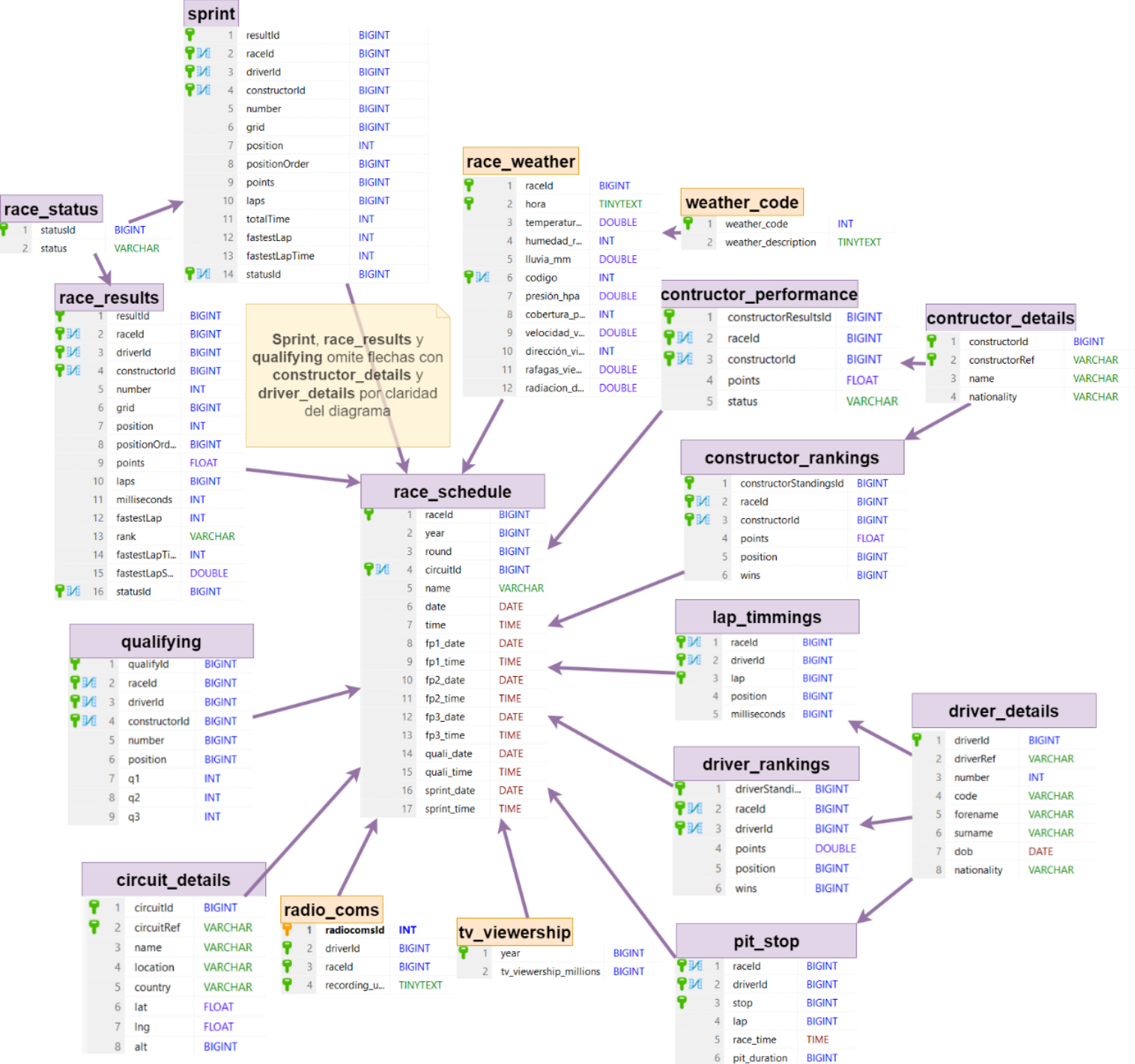
# Creando el Data Warehouse







Información para el data warehouse






# Diagrama estrella

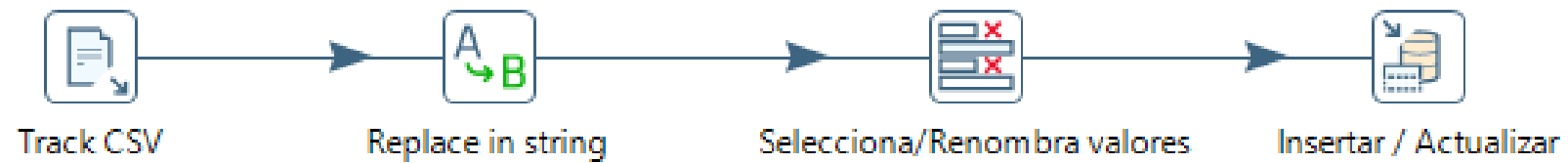


Pit\_stop



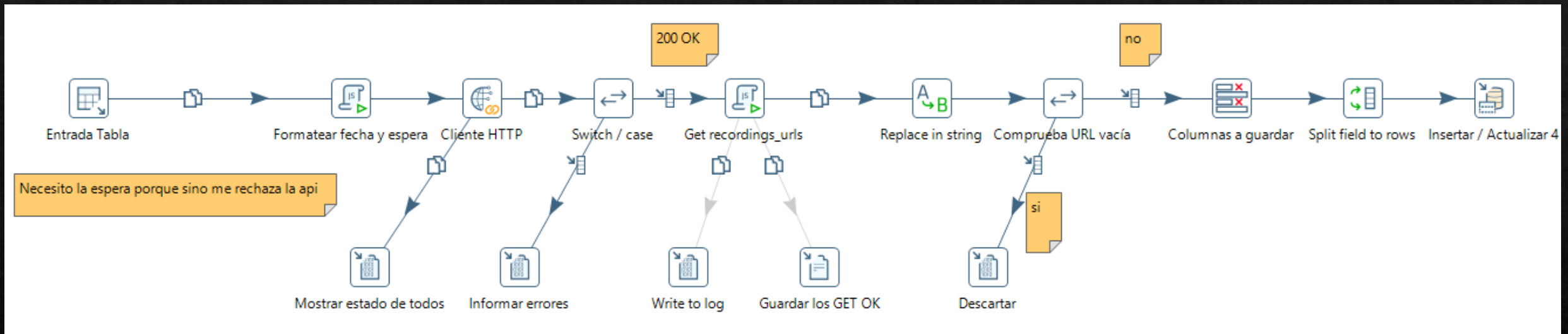
Insertar / Actualizar 4

#	raceId 	driverId 	stop 	lap	race_time	pit_duration
1	841	153	1	1	17:05:23	26.898
2	841	30	1	1	17:05:52	25.021
3	841	17	1	11	17:20:48	23.426
4	841	4	1	12	17:22:34	23.251
5	841	13	1	13	17:24:10	23.842
6	841	22	1	13	17:24:29	23.643
7	841	20	1	14	17:25:17	22.603
8	841	814	1	14	17:26:03	24.863






#	circui... 🔑 ▲ <sup>1</sup>	circuitRef 🔑	name	location	country	lat	lng	alt
1	1	albert_park	Albert Park Grand Prix Circuit	Melbourne	Australia	-37,8497	144,968	10
2	2	sepang	Sepang International Circuit	Kuala Lumpur	Malaysia	2,76083	101,738	18
3	3	bahrain	Bahrain International Circuit	Sakhir	Bahrain	26,0325	50,5106	7
4	4	catalunya	Circuit de Barcelona-Catalunya	Montmeló	Spain	41,57	2,26111	109
5	5	istanbul	Istanbul Park	Istanbul	Turkey	40,9517	29,405	130
6	6	monaco	Circuit de Monaco	Monte-Carlo	Monaco	43,7347	7,42056	7
7	7	villeneuve	Circuit Gilles Villeneuve	Montreal	Canada	45,5	-73,5228	13

# Capturando Audios





#	drive...  ▲1	raceId 	recording_url_item 
1	1	1.098	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
2	1	1.098	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
3	1	1.098	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
4	1	1.099	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
5	1	1.099	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
6	1	1.099	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
7	1	1.099	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
8	1	1.099	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
9	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
10	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
11	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
12	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
13	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
14	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
15	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
16	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
17	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
18	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
19	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
20	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
21	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
22	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
23	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
24	1	1.100	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
25	1	1.101	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
26	1	1.101	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
27	1	1.101	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
28	1	1.102	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
29	1	1.102	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>
30	1	1.102	<a href="https://livetiming.formula1.com/static/2023/202...">https://livetiming.formula1.com/static/2023/202...</a>

^ #	Nombre paso	Numero Copia	Leído	Escrito	Entrada	Salida	Actualizado	Rejected	Errores	Activo	Tiempo	Velocidad (r/s)	Pri/E/S
1	Entrada Tabla	0	0	6321	6321	0	0	0	0	Finalizado	0.1s	70.233	-
2	Formatear fecha y espera	0	6321	6321	0	0	0	0	0	Finalizado	53mn 29s	2	-
3	Cliente HTTP	0	6321	12642	0	0	0	0	0	Finalizado	53mn 29s	4	-
4	Switch / case	0	6321	6321	0	0	0	0	0	Finalizado	53mn 29s	2	-
5	Get recordings_urls	0	6319	6319	0	0	0	0	0	Finalizado	53mn 29s	2	-
6	Informar errores	0	2	2	0	0	0	0	0	Finalizado	53mn 29s	0	-
7	Replace in string	0	6319	6319	0	0	0	0	0	Finalizado	53mn 29s	2	-
8	Comprueba URL vacía	0	6319	6319	0	0	0	0	0	Finalizado	53mn 29s	2	-
9	Mostrar estado de todos	0	6321	6321	0	0	0	0	0	Finalizado	53mn 29s	2	-
10	Columnas a guardar	0	604	604	0	0	0	0	0	Finalizado	53mn 29s	0	-
11	Split field to rows	0	604	4164	0	0	0	0	0	Finalizado	53mn 29s	1	-
12	Insertar / Actualizar 4	0	4164	4164	4164	3796	0	0	0	Finalizado	53mn 29s	1	-
13	Descartar	0	5715	5715	0	0	0	0	0	Finalizado	53mn 29s	2	-

url

[https://api.openf1.org/v1/team\\_radio?driver\\_number=63&date=2021-05-02](https://api.openf1.org/v1/team_radio?driver_number=63&date=2021-05-02)

[https://api.openf1.org/v1/team\\_radio?driver\\_number=77&date=2021-05-02](https://api.openf1.org/v1/team_radio?driver_number=77&date=2021-05-02)

HTTP_RESPONSE	HTTP_RESPONSE_CODE
<h1>An error occurred</h1> <pre>Traceback (most recent call last): File "/usr/local/lib/python3.10/site-packages/http...	500
<h1>An error occurred</h1> <pre>Traceback (most recent call last): File "/usr/local/lib/python3.10/site-packages/http...	500

```
1 SELECT recording_url_item, COUNT(*) AS repeticiones
2 FROM radio_coms
3 GROUP BY recording_url_item
4 HAVING COUNT(*) > 1;
5
```



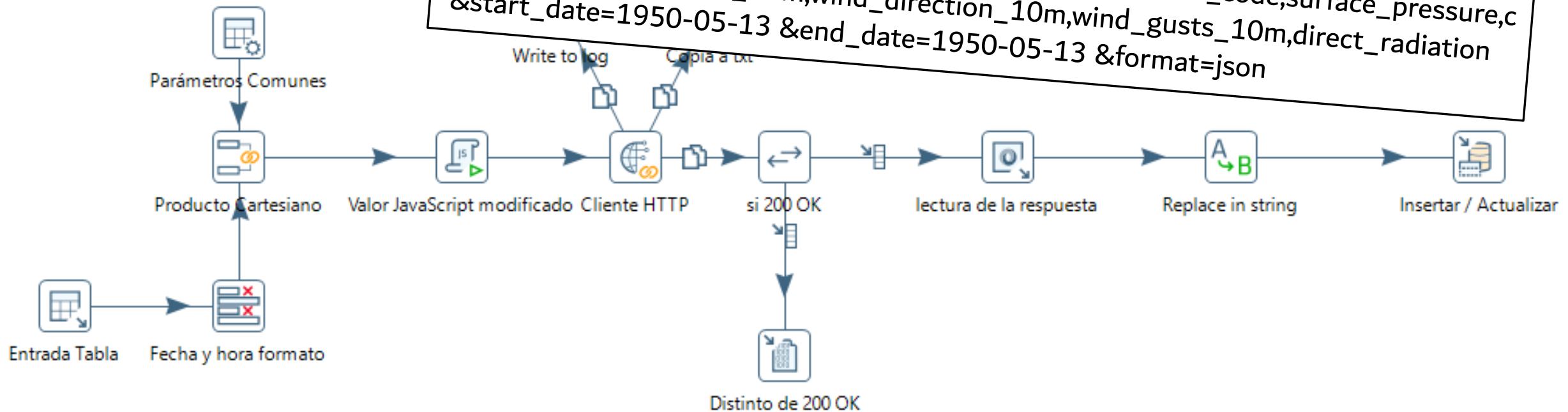
radio\_coms (0r × 2c)

#	recording_url_item	repeticiones
---	--------------------	--------------



# Capturando Registros Meteorológicos

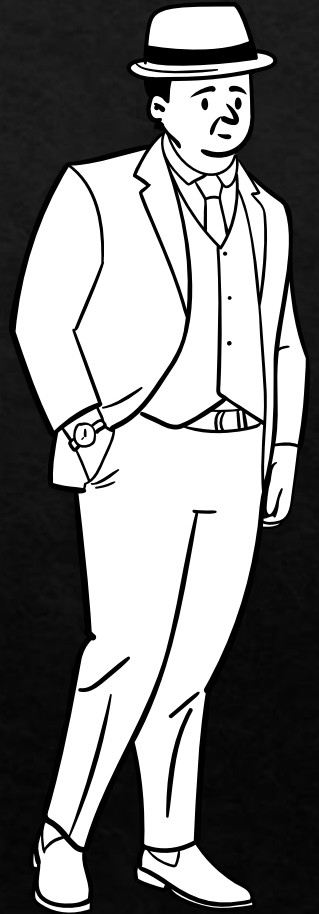
[https://archive-api.open-meteo.com/v1/archive?](https://archive-api.open-meteo.com/v1/archive?latitude=37.8497&longitude=144.968&hourly=temperature_2m,relative_humidity_2m,rain,weather_code,surface_pressure,cloud_cover,wind_speed_10m,wind_direction_10m,wind_gusts_10m,direct_radiation&start_date=1950-05-13&end_date=1950-05-13&format=json)  
latitude=37.8497  
&longitude=144.968  
&hourly=temperature\_2m,relative\_humidity\_2m,rain,weather\_code,surface\_pressure,cloud\_cover,wind\_speed\_10m,wind\_direction\_10m,wind\_gusts\_10m,direct\_radiation  
&start\_date=1950-05-13 &end\_date=1950-05-13 &format=json



#	Nombre paso	Numero Copia	Leído	Escrito	Entrada	Salida	Actualizado	Rejected	Errores	Activo	Tiempo	Velocidad (r/s)	Pri/E/S
1	Parámetros Comunes	0	0	2	0	0	0	0	0	Finalizado	0.0s	2.000	-
2	Entrada Tabla	0	0	503	503	0	0	0	0	Finalizado	0.0s	100.600	-
3	Fecha y hora formato	0	503	503	0	0	0	0	0	Finalizado	0.0s	55.889	-
4	Producto Cartesiano	0	505	1006	0	0	0	0	0	Finalizado	0.4s	2.712	-
5	Valor JavaScript modificado	0	1006	1006	0	0	0	0	0	Finalizado	4mn 21s	4	-
6	Cliente HTTP	0	1006	3018	0	0	0	0	0	Finalizado	4mn 21s	12	-
7	Write to log	0	1006	1006	0	0	0	0	0	Finalizado	4mn 21s	4	-
8	si 200 OK	0	1006	1006	0	0	0	0	0	Finalizado	4mn 21s	4	-
9	lectura de la respuesta	0	503	12072	12072	0	0	0	0	Finalizado	4mn 21s	46	-
10	Replace in string	0	12072	12072	0	0	0	0	0	Finalizado	4mn 21s	46	-
11	Copia a txt	0	1006	1006	0	1006	0	0	0	Finalizado	4mn 21s	4	-
12	Distinto de 200 OK	0	503	503	0	0	0	0	0	Finalizado	4mn 21s	2	-
13	Insertar / Actualizar	0	12072	12072	12072	12024	0	0	0	Finalizado	4mn 22s	46	-

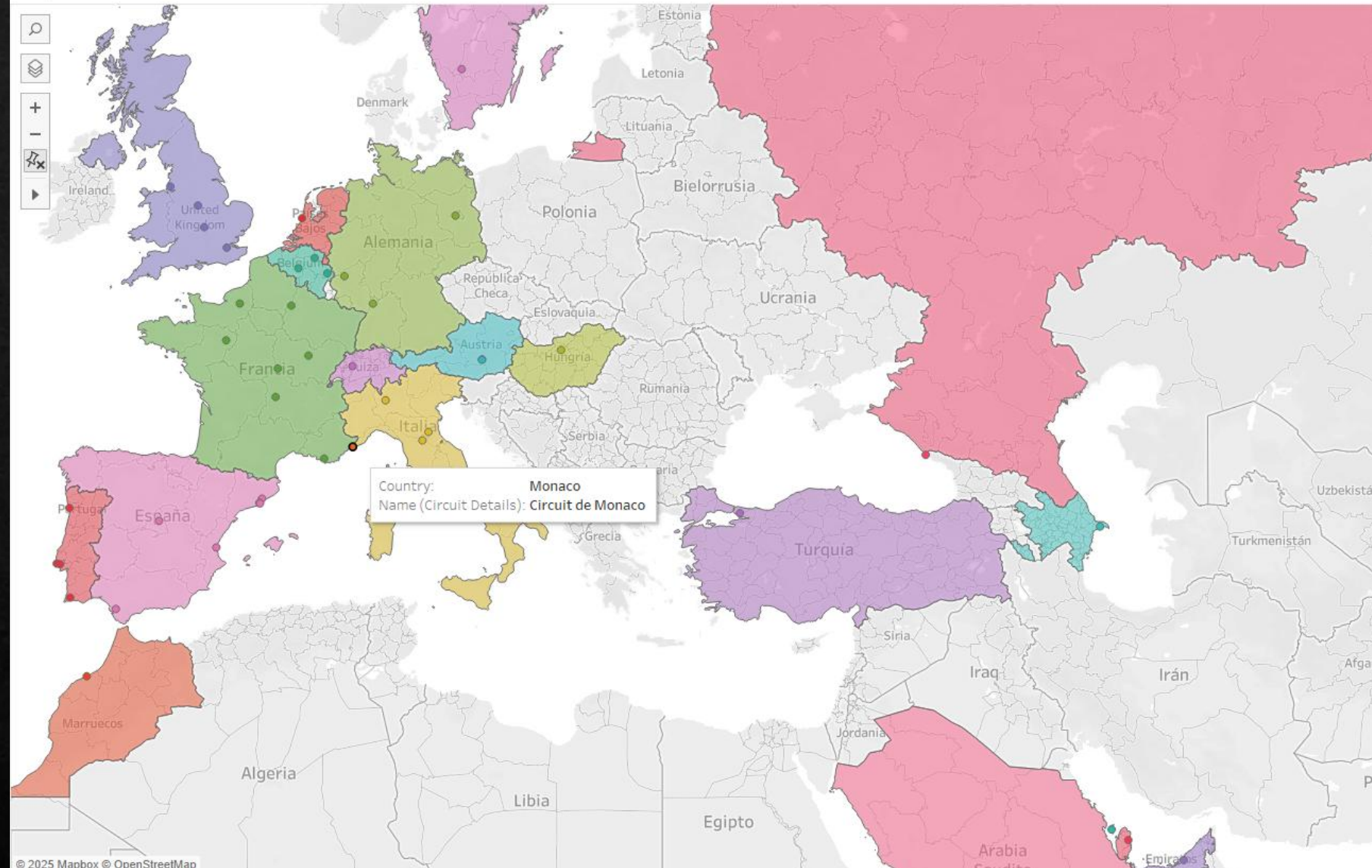
#	rac... 📍▲1	hora 📍	temperatura_c	humedad_relativa	lluvia_mm	codigo 📍	presión_hpa	cobertura_porcentaje	velocidad_viento_kmh	dirección_viento_grados	rafagas_viento_kmh	radiacion_directa_wm2
1	1	00:00	22	37	0	0	1.022,7	0	1,8	270	12,2	468
2	1	01:00	23,5	34	0	0	1.022,6	0	4,8	207	17,6	606
3	1	02:00	24,1	36	0	0	1.022,1	0	8,9	194	23,8	692
4	1	03:00	24,3	38	0	0	1.021,7	0	12,4	190	28,1	717
5	1	04:00	24,2	41	0	0	1.021,6	0	14,9	187	31	679
6	1	05:00	23,8	43	0	0	1.021,4	0	16,6	184	33,5	582
7	1	06:00	23	46	0	0	1.021,5	2	16,6	181	34,2	435
8	1	07:00	21,6	51	0	0	1.022	3	15,5	183	33,5	258
9	1	08:00	19,6	61	0	0	1.022,5	6	13,7	185	30,2	81
10	1	09:00	17,7	71	0	0	1.023,4	0	12,6	185	25,9	1
11	1	10:00	16,6	79	0	0	1.024,2	0	11,2	184	22,7	0
12	1	11:00	15,7	85	0	0	1.024,5	0	10,4	182	20,9	0
13	1	12:00	15,1	90	0	0	1.025,2	1	9,8	186	18,7	0
14	1	13:00	14,5	93	0	0	1.025,1	2	9,8	188	17,6	0
15	1	14:00	14,3	95	0	0	1.025	16	10,6	190	16,9	0
16	1	15:00	14,4	96	0	2	1.024,6	59	10,9	188	18,7	0
17	1	16:00	14,5	96	0	2	1.024,3	75	11,2	184	20,5	0
18	1	17:00	14,6	95	0	2	1.024,1	59	10,1	186	20,9	0
19	1	18:00	14,6	95	0	2	1.024	57	10,5	188	20,2	0
20	1	19:00	14,6	94	0	1	1.024,4	45	10,6	190	20,9	0
21	1	20:00	14,7	94	0	2	1.024,6	54	10,9	186	20,2	0
22	1	21:00	14,7	94	0	1	1.025,1	42	10,9	186	19,4	1
23	1	22:00	15,5	85	0	3	1.026	85	12,6	177	25,2	28
24	1	23:00	16,4	79	0	3	1.026	100	13,1	171	28,8	128

# Haciendo Tablones con Tableau

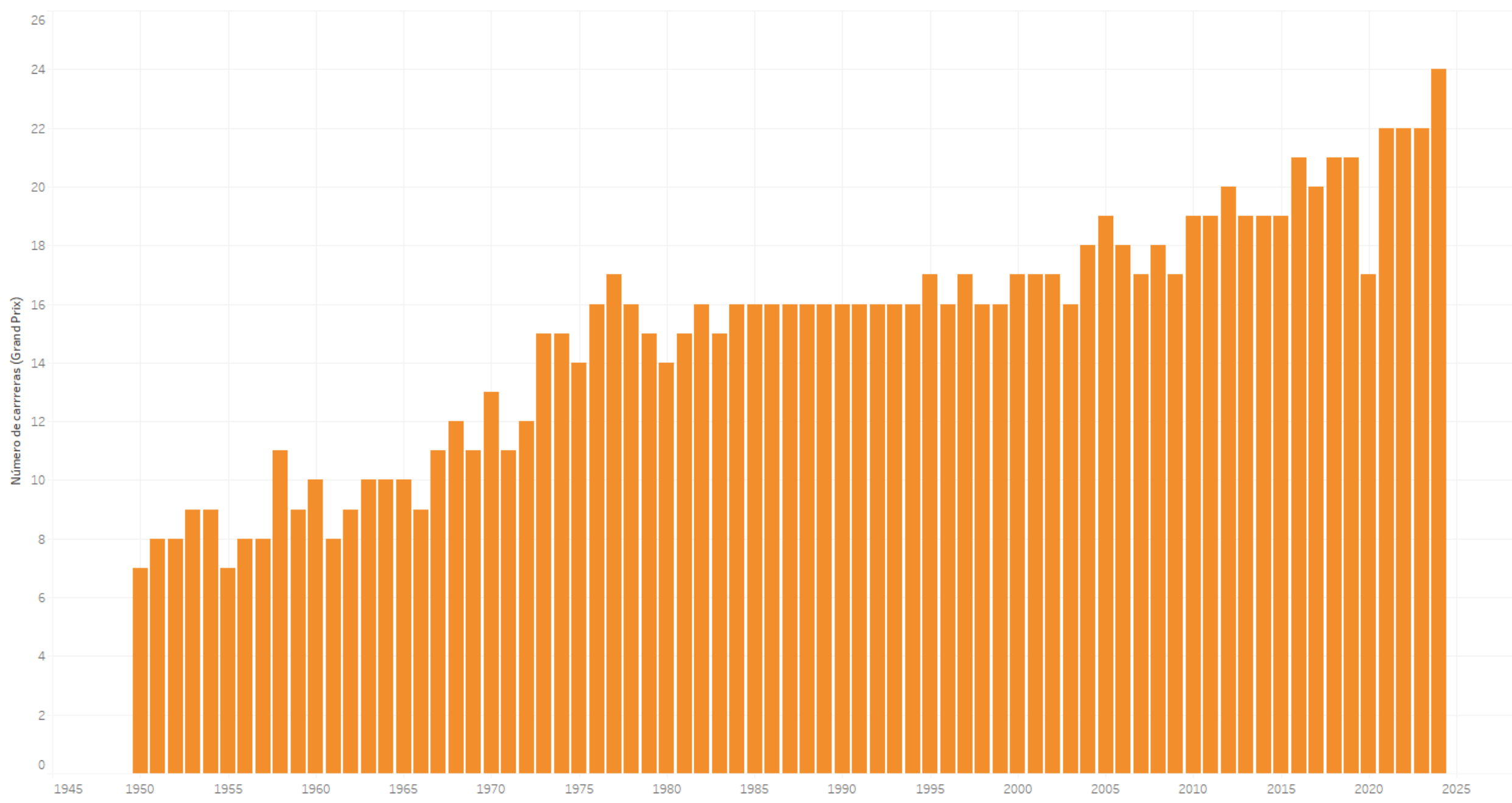




## Mapa de Circuitos en el Mundo



Numero de carreras por año



Visualizador de resultados de carreras

Selector de Año

Calendario - 2024

Date									
marzo	abril	mayo	junio	julio	agosto	septiembre	octubre	noviembre	diciembre
Australian Grand Prix Bahrain Grand Prix Saudi Arabian Grand Prix	Chinese Grand Prix Japanese Grand Prix	Emilia Romagna Grand Prix Miami Grand Prix Monaco Grand Prix	Austrian Grand Prix Canadian Grand Prix Spanish Grand Prix	Belgian Grand Prix British Grand Prix Hungarian Grand Prix	Dutch Grand Prix	Azerbaijan Grand Prix Italian Grand Prix Singapore Grand Prix	Mexico City Grand Prix United States Grand Prix	Las Vegas Grand Prix São Paulo Grand Prix	Abu Dhabi Grand Prix Qatar Grand Prix

Meteorología del día

Hora	Date
00:00	14/03/1..
01:00	
02:00	
03:00	
04:00	
05:00	
06:00	
07:00	
08:00	
09:00	
10:00	
11:00	
12:00	

Resultados de carrera

Nombre Completo	Nationality ..	Name (Cont..	position..	Grid (Race ..	Tiempo Del Piloto
Räikkönen Kimi	Finnish	McLaren	1	1	87:16,83
Alonso Fernando	Spanish	Renault	2	3	87:44,48
Trulli Jarno	Italian	Toyota	3	5	88:02,77
Schumacher Ralf	German	Toyota	4	4	88:03,54
Fisichella Giancarlo	Italian	Renault	5	6	88:14,76
Webber Mark	Australian	Williams	6	2	88:25,37
Pablo Montoya Juan	Colombian	McLaren	7	7	NULL
Coulthard David	British	Red Bull	8	9	NULL
Barrichello Rubens	Brazilian	Ferrari	9	16	NULL
Heidfeld Nick	German	Williams	10	17	NULL
Massa Felipe	Brazilian	Sauber	11	10	NULL
Monteiro Tiago	Portuguese	Jordan	12	18	NULL
Karthikeyan Narain	Indian	Jordan	13	13	NULL
Villeneuve Jacques	Canadian	Sauber	14	12	NULL
Schumacher Michael	German	Ferrari	15	8	NULL
Albers Christijan	Dutch	Minardi	16	14	NULL

Status

- Finished
- +1 Lap
- +3 Laps
- Engine
- Gearbox
- Puncture
- Spun off

Descripción

- Cielo despe..
- Nublado
- Parcialmen..
- Principalme..
- Tormenta d..
- Viento fuer..
- Viento ligero
- Viento rach..
- Visibilidad ..
- Visibilidad ..

# Conclusiones





La fórmula uno está en uno  
de sus mejores momentos

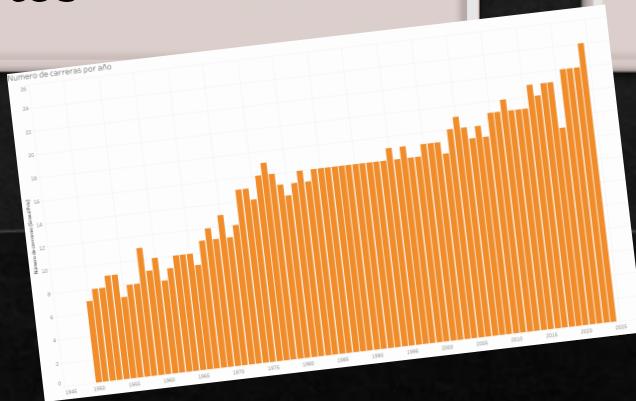
- Más circuitos
- Más carreras
- Más pilotos

Más segura

- Menos accidentes
- Más coches finalizan la  
carrera de promedio

Más divertida

- Más adelantamientos
- Más velocidad
- Carreras más cortas



Visualizador de resultados de carreras

Selector de Año

Calendario - 2024

enero	febrero	marzo	abril	mayo	junio	julio	agosto	septiembre	octubre	noviembre	diciembre
Australian Grand Prix	Chinese Grand Prix	Emilia Romagna Grand Prix	Australian Grand Prix	Belgian Grand Prix	Dutch Grand Prix	Azerbaijan Grand Prix	Mexico City Grand Prix	Las Vegas Grand Prix	Abu Dhabi Grand Prix	Qatar Grand Prix	
Saudi Arabian Grand Prix	Jordanian Grand Prix	Miami Grand Prix	Monaco Grand Prix	Spanish Grand Prix	British Grand Prix	Hungarian Grand Prix	Italian Grand Prix	Singapore Grand Prix	United States Grand Prix	San Paulo Grand Prix	

Meteorología del día

Resultados de carrera

	Nombre Completo	Nationality	Name (Cont.)	position	L	Grid (Race)	Tiempo Del Piloto	Status
00:00	Max Verstappen	Dutch	McLaren	1	1	87:02.83	Finished	Finished
01:00	Lando Norris	British	McLaren	2	3	87:44.48	Finished	Finished
02:00	Charles Leclerc	Monegasque	Ferrari	3	4	88:02.77	Finished	Finished
03:00	Sergio Pérez	Mexican	Ferrari	4	5	88:03.64	Finished	Finished
04:00	George Russell	British	Mercedes	5	6	88:14.76	Finished	Finished
05:00	Lewis Hamilton	British	Mercedes	6	7	88:25.37	Finished	Finished
06:00	Yuki Tsunoda	Japanese	AlphaTauri	7	8	88:25.37	Finished	Finished
07:00	Nico Hülkenberg	German	Haas	8	9	88:25.37	Finished	Finished
08:00	Kevin Magnussen	Danish	Haas	9	10	88:25.37	Finished	Finished
09:00	Esteban Ocon	French	Alpine	10	11	88:25.37	Finished	Finished
10:00	Pierre Gasly	French	Alpine	11	12	88:25.37	Finished	Finished
11:00	Valtteri Bottas	Finnish	Alfa Romeo	12	13	88:25.37	Finished	Finished
12:00	Antonio Giovinazzi	Italian	Alfa Romeo	13	14	88:25.37	Finished	Finished
	Sebastian Vettel	German	Aston Martin	14	15	88:25.37	Finished	Finished
	Mick Schumacher	German	Aston Martin	15	16	88:25.37	Finished	Finished
	Alonso Fernández de Sotomayor	Spanish	Alpine	16	17	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	17	18	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	18	19	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	19	20	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	20	21	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	21	22	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	22	23	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	23	24	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	24	25	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	25	26	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	26	27	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	27	28	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	28	29	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	29	30	88:25.37	Finished	Finished
	Alfredas Čiurlionis	Lithuanian	Alpine	30	31	88:25.37	Finished	Finished

# Observaciones

The background is a blurred image of a document. It features a line graph with a blue line and several data points. A pen is visible in the upper right corner. The text is overlaid on a dark, semi-transparent rectangular box.

# Análisis de resultados de F1

Óscar Lestón Casais