

Visualización de Datos

Tableau

Juan Gómez Romero

<http://decsai.ugr.es>

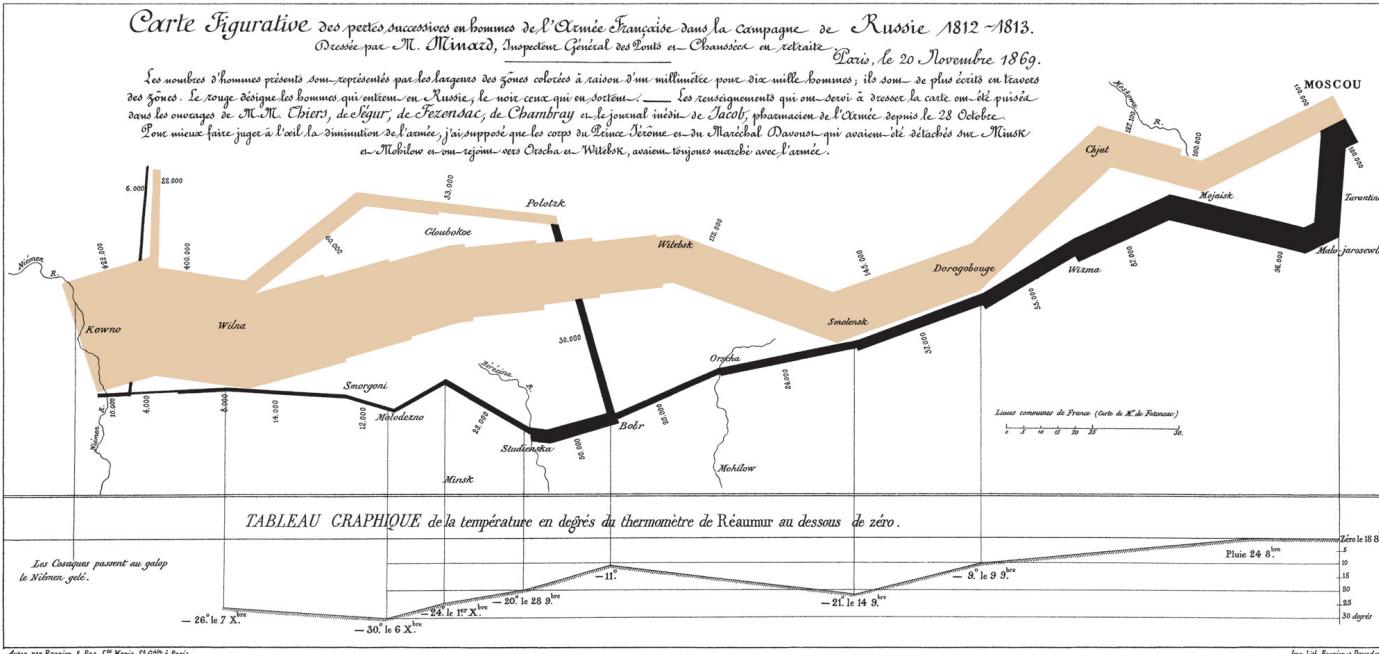
Departamento de Ciencias de la Computación e Inteligencia Artificial
Universidad de Granada



UNIVERSIDAD
DE GRANADA

Visualización de datos

Motivación



Charles Minard, *The march on Moscow*. 1869.

<https://www.tableau.com/learn/whitepapers/5-most-influential-visualizations>

Tableau

Descripción

Tableau /ta-bló/ Herramienta interactiva para visualización de datos

Tableau Desktop Software de escritorio para creación de visualizaciones

<https://www.tableau.com/es-es/products/desktop>

PROBAR AHORA

<https://www.tableau.com/es-es/academic/students>

Tableau Reader Lector de visualizaciones realizadas con Tableau Desktop

Tableau Prep Software de escritorio para preprocesamiento de datos

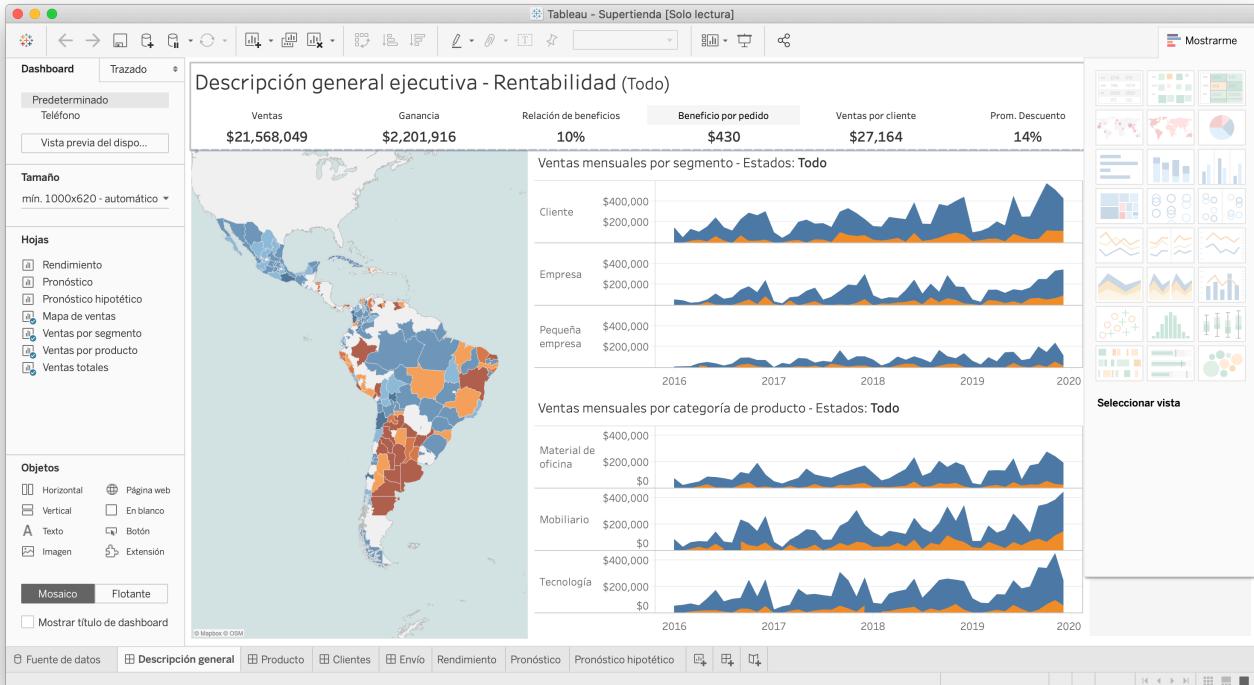
Tableau Online Versión web de Tableau

Tableau Server Servidor de visualizaciones para compartir visualizaciones y tableros de mando

Tableau

Descripción

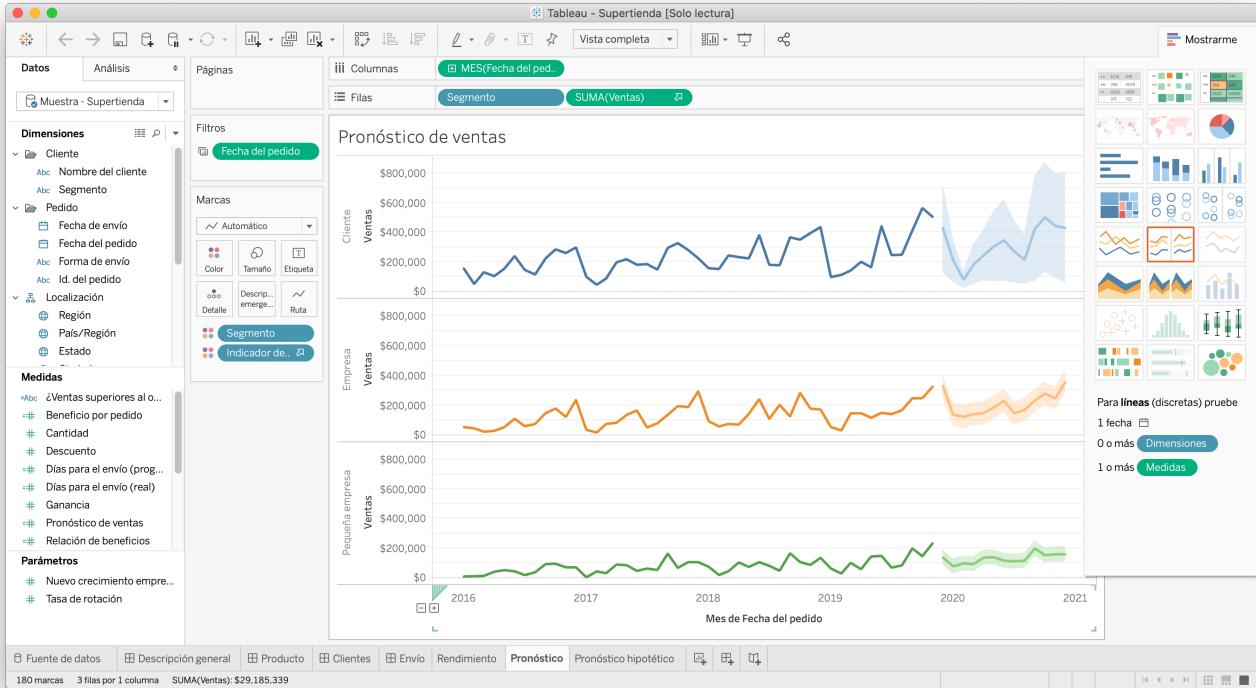
Tableau 2019.4



Tableau

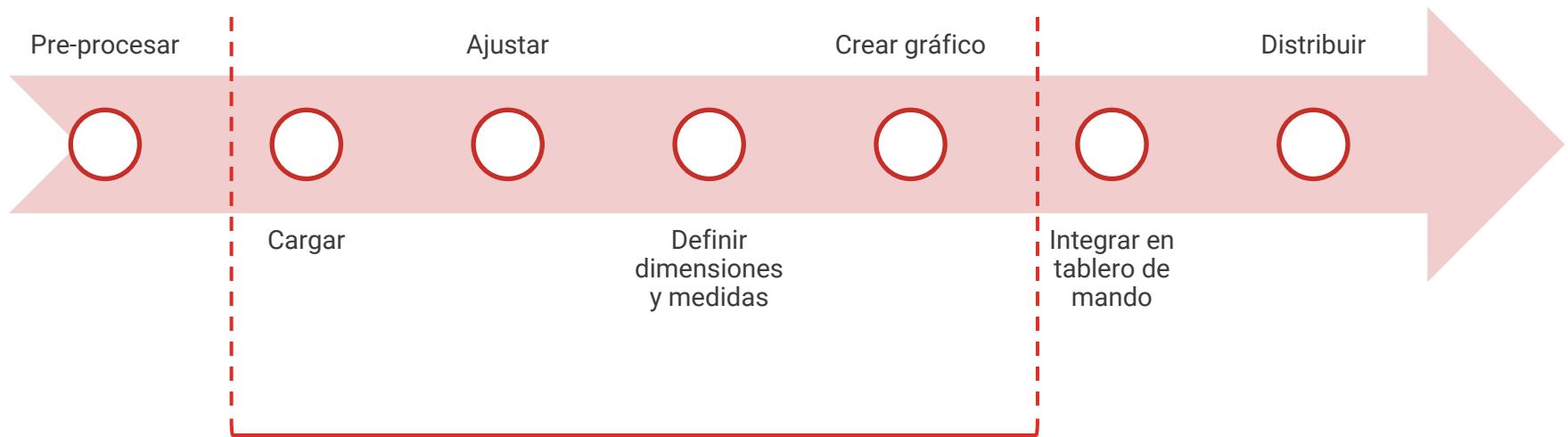
Descripción

Tableau 2019.4



Tableau

Flujo de trabajo



Tableau

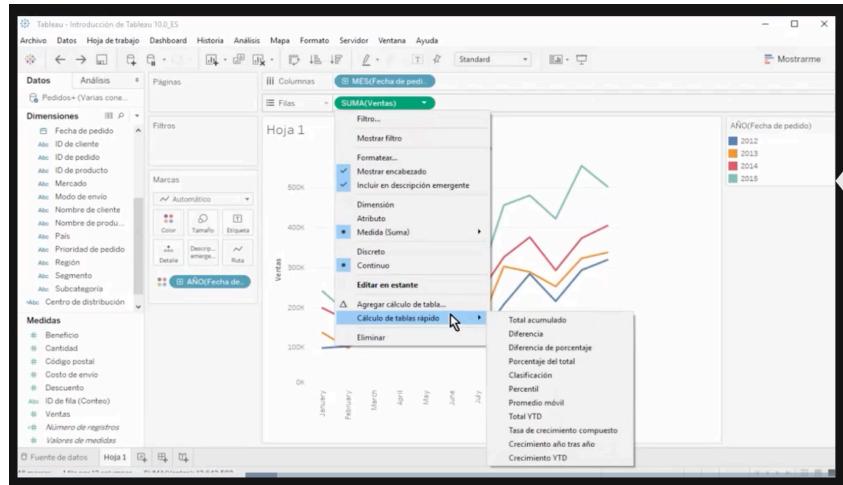
Bibliografía

Kits de inicio de Tableau

<https://www.tableau.com/es-es/learn/starter-kits>

Recursos de aprendizaje de Tableau

<https://www.tableau.com/es-es/learn/training>



The screenshot shows the Tableau software interface. On the left, the data source 'Pedidos (Varias cone...' is selected in the 'Datos' (Data) pane. The 'Medidas' (Measures) pane lists 'Ventas' (Sales), 'Beneficio' (Profit), 'Cantidad' (Quantity), 'Código postal' (Zip Code), 'Costo de envío' (Shipping cost), 'Descuento' (Discount), 'ID de fila (Conteo)' (Row ID (Count)), 'Ventas' (Sales), 'Número de registros' (Number of records), and 'Valores de medidas' (Measure values). The 'Dimensiones' (Dimensions) pane lists 'Fecha de pedido' (Order date), 'Alí' (Ali), 'ID de pedido' (Order ID), 'Nombre de producto' (Product name), 'Mercado' (Market), 'Modo de envío' (Delivery mode), 'Nombre del cliente' (Customer name), 'Nombre de producto' (Product name), 'País' (Country), 'Prioridad del pedido' (Order priority), 'Región' (Region), 'Segmento' (Segment), 'Subcategoría' (Subcategory), and 'Centro de distribución' (Distribution center). A line chart titled 'Hoja 1' displays 'SUMA(Ventas)' (Sum of Sales) over time from January to July. A context menu is open on the chart, with the 'Cálculo de tablas rápidos' (Quick table calculations) option highlighted. To the right, a learning platform interface shows the 'Introducción' (Introduction) topic with a duration of 27 minutes.

TEMA ACTUAL

VER TODOS

Introducción

Introducción 27 MIN

La interfaz de Tableau 5 MIN

Distribución y publicación 4 MIN

Tableau

Bibliografía

Daniel G. Murray. **Tableau Your Data!** Wiley, 2015

<https://tanthiamhuat.files.wordpress.com/2015/07/tableau-your-data.pdf>

Ryan Sleeper. **Practical Tableau: 100 Tips, Tutorials, and Strategies from a Tableau Zen Master 1st Edition.** O'Reilly 2018.

<https://proquest.safaribooksonline.com/book/databases/9781491977309>

Linda Ryan. **Visual Data Storytelling with Tableau.** Addison-Wesley Professional 2018.

<https://proquest.safaribooksonline.com/book/databases-and-reporting-tools/9780134712963>

Nathan Yau. **Visualize this.** O'Reilly 2018.

<https://proquest.safaribooksonline.com/book/web-development/usability/9781118140260>

Cole Nussbaumer Knaflic. **Storytelling with Data: A Data Visualization Guide for Business Professionals.** Wiley 2015.

<https://proquest.safaribooksonline.com/book/databases/business-intelligence/9781119002253>

FIFA 2018

EJERCICIO

Tableau

Carga de datos

Descargar: <https://github.com/jgromero/dataviz19>

Detailed attributes for every player registered in the latest edition of FIFA 19 database.

<https://www.kaggle.com/karangadiya/fifa19> [89 columnas]

↳ ID unique id for every player	Ⓐ Body Type body type of player	Ⓐ CAM rating on scale of 100	# Finishing rating on scale of 100	# LongShots rating on scale of 100
Ⓐ Name name	✓ Real Face true or false	Ⓐ RAM rating on scale of 100	# HeadingAccuracy rating on scale of 100	# Aggression rating on scale of 100
# Age age	Ⓐ Position position on the pitch	Ⓐ LM rating on scale of 100	# ShortPassing rating on scale of 100	# Interceptions rating on scale of 100
⌚ Photo url to the player's photo	# Jersey Number jersey number	Ⓐ LCM rating on scale of 100	# Volleys rating on scale of 100	# Positioning rating on scale of 100
Ⓐ Nationality nationality	📅 Joined joined date	Ⓐ CM rating on scale of 100	# Dribbling rating on scale of 100	# Vision rating on scale of 100
⌚ Flag url to players's country flag	Ⓐ Loaned From club name if applicable	Ⓐ RCM rating on scale of 100	# Curve rating on scale of 100	# Penalties rating on scale of 100
# Overall overall rating	Ⓐ Contract Valid Until contract end date	Ⓐ RM rating on scale of 100	# FKAccuracy rating on scale of 100	# Composure rating on scale of 100
# Potential potential rating	Ⓐ Height height of the player	Ⓐ LWB rating on scale of 100	# LongPassing rating on scale of 100	# Marking rating on scale of 100
Ⓐ Club current club	Ⓐ Weight weight of the player	Ⓐ LDM rating on scale of 100	# BallControl rating on scale of 100	# StandingTackle rating on scale of 100
⌚ Club Logo url to club logo	Ⓐ LS rating on scale of 100	Ⓐ CDM rating on scale of 100	# Acceleration rating on scale of 100	# SlidingTackle rating on scale of 100
Ⓐ Value current market value	Ⓐ ST rating on scale of 100	Ⓐ RDM rating on scale of 100	# SprintSpeed rating on scale of 100	# GKDiving rating on scale of 100
Ⓐ Wage current wage	Ⓐ RS rating on scale of 100	Ⓐ RWB rating on scale of 100	# Agility rating on scale of 100	# GKHandling rating on scale of 100
# Special special	Ⓐ LW rating on scale of 100	Ⓐ LB rating on scale of 100	# Reactions rating on scale of 100	# GKKicking rating on scale of 100
Ⓐ Preferred Foot left/right	Ⓐ LF rating on scale of 100	Ⓐ LCB rating on scale of 100	# Balance rating on scale of 100	# GKPositioning rating on scale of 100
# International Reputation rating on scale of 5	Ⓐ CF rating on scale of 100	Ⓐ CB rating on scale of 100	# ShotPower rating on scale of 100	# GKReflexes rating on scale of 100
# Weak Foot rating on scale of 5	Ⓐ RF rating on scale of 100	Ⓐ RCB rating on scale of 100	# Jumping rating on scale of 100	A Release Clause release clause value
# Skill Moves rating on scale of 5	Ⓐ RW rating on scale of 100	Ⓐ RB rating on scale of 100	# Stamina rating on scale of 100	
Ⓐ Work Rate attack work rate/defence work rate	Ⓐ LAM rating on scale of 100	Ⓐ Crossing rating on scale of 100	# Strength rating on scale of 100	

Tableau

Ajustar

Tableau - Libro1

Conecciones Añadir

fifa19-data Archivo de texto

Archivos

Usar el intérprete de datos Puede que el intérprete de datos esté disponible para limpiar su libro de trabajo Archivo de texto.

fifa19-data.csv

Nueva unión

Conexión En tiempo real Extraer Filtros 0 | Añadir

fifa19-data

fifa19-data.csv

Propiedades del archivo de texto > Separador de campos

Abc	Abc	Abc	Abc	Abc	Abc	Abc	Abc
fifa19-data.csv	fifa19-data.csv	fifa19-data.csv	fifa19-data.csv	fifa19-data.csv	fifa19-data.csv	fifa19-data.csv	fifa19-data.csv
,ID,Name,Age,Pho...	Logo,Value,Wage,S...	Foot,International	Reputation,Weak	Foot,Skill	Moves,Work	Rate,Body	Type,Real
0,158023,L.	Messi,31,https://cdn....	Barcelona,https://cd...	Medium,Messi,Yes,R...	1,	2004'',2021,5'7,159...	nulo	nulo
1,20801,Cristiano	Ronaldo,33,https://cd...	Low,C.	Ronaldo,Yes,5'7,"Jul	10,	2018'',2022,6'2,183...	nulo	nulo
2,190871,Neymar	Jr,26,https://cdn.sof...	Saint-Germain,https://...	Medium,Neymar,Yes,...	3,	2017'',2022,5'9,150...	nulo	nulo
3,193080,De	Gea,27,https://cdn.s...	United,https://cdn.so...	Medium,Lean,Yes,GK,...	1,	2011'',2020,6'4,168...	nulo	nulo
4,192985,K.	De	Bruyne,27,https://cd...	City,https://cdn.sofif...	High,Normal,Yes,RC...	30,	2015'',2023,5'11,15...	nulo
5,183277,E.	Hazard,27,https://cd...	Medium,Normal,Yes,...	1,	2012'',2020,5'8,163...	nulo	nulo	nulo
6,177003,L.	Modric,32,https://cd...	Madrid,https://cdn.s...	High,Lean,Yes,RCM,1...	1,	2012'',2020,5'8,146...	nulo	nulo
7,176580,L.	Suárez,31,https://cd...	Barcelona,https://cd...	Medium,Normal,Yes,...	11,	2014'',2021,6'0,190...	nulo	nulo
8,155862,Sergio	Ramos,32,https://cd...	Madrid,https://cdn.s...	Medium,Normal,Yes,...	1,	2005'',2020,6'0,181...	nulo	nulo
9,200389,J.	Oblak,25,https://cdn...	Madrid,https://cdn.s...	Medium,Normal,Yes,...	16,	2014'',2021,6'2,192...	nulo	nulo

Fuente de datos Hoja 1

Tableau

Ajustar

Tableau - Libro1

fifa19-data

Conexión
En tiempo real Extraer

Filtros
0 | Añadir

fifa19-data.csv

Archivos
 Usar el intérprete de datos
Puede que el intérprete de datos esté disponible para limpiar su libro de trabajo Archivo de texto.

fifa19-data.csv

Nueva unión

Ordenar campos Orden de fuente de datos ▾ Mostrar alias Mostrar campos ocultos 1.000 filas

Messi, 31, https://cdn.sofifa.or..., Argentina, https://cdn.sofifa.or..., 94, 94, FC Barcelona, https://cdn.sofifa.or..., €110.5M, €110.5M, 19, Wag

Ronaldo, 33, https://cdn.sofifa.or..., Portugal, https://cdn.sofifa.or..., 94, 94, Juventus, https://cdn.sofifa.or..., €77M, €77M, 19, Wag

Leymar Jr, 26, https://cdn.sofifa.or..., Brazil, https://cdn.sofifa.or..., 92, 93, Paris Saint-Germain, https://cdn.sofifa.or..., €118.5M, €118.5M, 19, Wag

De Gea, 27, https://cdn.sofifa.or..., Spain, https://cdn.sofifa.or..., 91, 93, Manchester United, https://cdn.sofifa.or..., €72M, €72M, 19, Wag

De Bruyne, 27, https://cdn.sofifa.or..., Belgium, https://cdn.sofifa.or..., 91, 92, Manchester City, https://cdn.sofifa.or..., €102M, €102M, 19, Wag

Hazard, 27, https://cdn.sofifa.or..., Belgium, https://cdn.sofifa.or..., 91, 91, Chelsea, https://cdn.sofifa.or..., €93M, €93M, 19, Wag

Modrić, 32, https://cdn.sofifa.or..., Croatia, https://cdn.sofifa.or..., 91, 91, Real Madrid, https://cdn.sofifa.or..., €67M, €67M, 19, Wag

Suárez, 31, https://cdn.sofifa.or..., Uruguay, https://cdn.sofifa.or..., 91, 91, FC Barcelona, https://cdn.sofifa.or..., €80M, €80M, 19, Wag

Ramos, 32, https://cdn.sofifa.or..., Spain, https://cdn.sofifa.or..., 91, 91, Real Madrid, https://cdn.sofifa.or..., €51M, €51M, 19, Wag

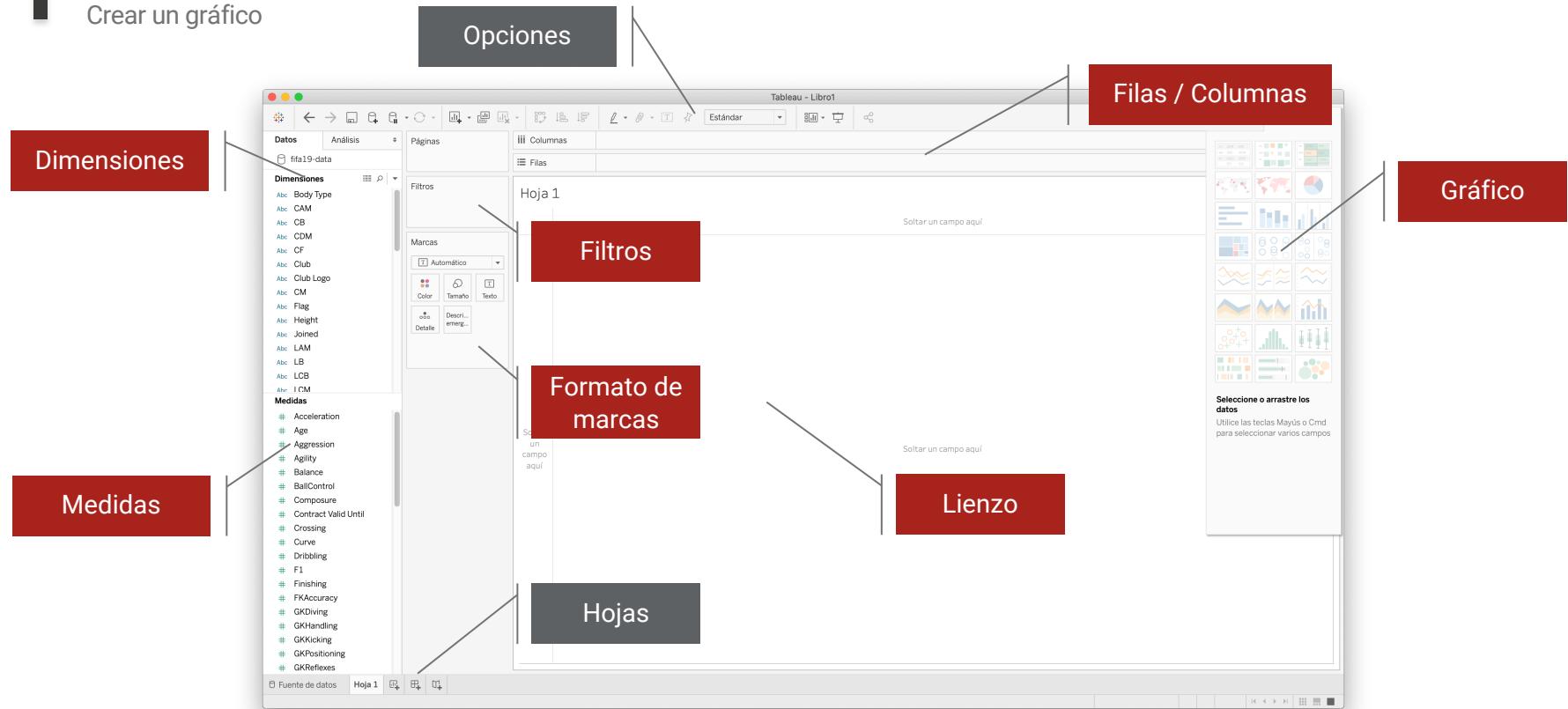
Oblak, 25, https://cdn.sofifa.or..., Slovenia, https://cdn.sofifa.or..., 90, 93, Atlético Madrid, https://cdn.sofifa.or..., €68M, €68M, 19, Wag

Fuente de datos Hoja 1 ▶ ▷ ▷ ▷

Función geográfica >
País / Región

Tableau

Crear un gráfico



Tableau

Definir dimensiones y medidas

Hecho

Elemento importante que se pretende analizar.

Ejemplo: fubolistas.

Dimensiones

Propiedades de los hechos que determinan el análisis.

Las dimensiones contienen valores cualitativos (por ejemplo, nombres, fechas o datos geográficos). Puede utilizar las dimensiones para categorizar, segmentar y revelar los detalles de los datos. Las dimensiones afectan al nivel de detalle de la vista.

Ejemplo: *nationality, body type, crime against*, etc.

Medidas

Valoración numérica acerca del hecho que nos va a servir para analizarlo.

Las medidas contienen valores numéricos cuantitativos que se pueden medir. Las medidas se pueden agregar. Al arrastrar una medida a la vista, Tableau aplica una agregación a esa medida (de forma predeterminada).

Ejemplo: *age, overall*, etc.

Tableau

Tablas de datos

The screenshot shows the Tableau interface with a data visualization titled "Mejores 100 jugadores". The visualization consists of a table with four columns: Name, Nationality, Overall, and Wage. The table lists 100 players from various countries, including Argentina, Portugal, Brazil, Spain, Uruguay, Croatia, Belgium, Germany, Poland, Slovenia, Spain, Uruguay, Belgium, Spain, Argentina, Argentina, France, Germany, Germany, England, Italy, Uruguay, France, Brazil, Slovenia, Gabon, Brazil, Egypt, Germany, Italy, France, Colombia, Spain, France, Argentina, Italy, Wales, Brazil, Brazil, France, Denmark, France, Belgium, Spain, France, Argentina, Slovakia, Costa Rica, Senegal, and Spain. The "Overall" column ranges from 87 to 94, and the "Wage" column ranges from €110K to €505K.

Formatting title y subtítulo

Título: Ninguno

Sombreado: Ninguno

Borde: Ninguno

Subtítulo: Ninguno

Sombreado: Ninguno

Borde: Ninguno

Mejores 100 jugadores

Name	Nationality	Overall	Wage
L. Messi	Argentina	94	€505K
Cristiano Ronaldo	Portugal	94	€405K
Neymar Jr	Brazil	92	€250K
Sergio Ramos	Spain	93	€300K
L. Suárez	Uruguay	91	€455K
L. Modrić	Croatia	91	€420K
K. De Bruyne	Belgium	91	€355K
E. Hazard	Belgium	91	€340K
D. Gómez	Spain	91	€305K
T. Kroos	Germany	90	€355K
R. Lewandowski	Poland	90	€205K
J. Obrača	Slovenia	90	€94K
D. Silva	Spain	90	€285K
D. Godín	Uruguay	90	€125K
T. Courtois	Belgium	89	€240K
Sergio Busquets	Spain	89	€315K
S. Agüero	Argentina	89	€300K
J. Dybala	Argentina	89	€205K
N. Kavani	France	89	€25K
M. ter Stegen	Germany	89	€240K
M. Neuer	Germany	89	€130K
H. Kane	England	89	€205K
G. Chiellini	Italy	89	€215K
E. Cavani	Uruguay	89	€205K
A. Griezmann	France	89	€145K
Thiago Silva	Brazil	88	€165K
S. Handanović	Slovenia	88	€110K
P. Aubameyang	Gabon	88	€265K
M. Alves	Brazil	88	€205K
M. Salah	Egypt	88	€255K
M. Hummels	Germany	88	€150K
L. Insigne	Italy	88	€165K
K. Mbappé	France	88	€110K
J. Rodriguez	Colombia	88	€125K
I. Isco	Spain	88	€315K
H. Lloris	France	88	€150K
G. Higuaín	Argentina	88	€245K
G. Buffon	Italy	88	€77K
O. Béjar	Wales	88	€155K
Coutinho	Brazil	88	€340K
Casemiro	Brazil	88	€285K
C. Eriksen	Denmark	88	€205K
S. Umtiti	France	87	€205K
R. Lukaku	Belgium	87	€205K
P. Pogba	France	87	€240K
M. Icardi	Argentina	87	€130K
M. Hrubes	Slovakia	87	€125K
A. Nsue	Costa Rica	87	€125K
K. Koulibaly	Senegal	87	€135K
Jordi Alba	Spain	87	€250K

Tableau

Crear gráfico

Barras

Representación gráfica de una variable en forma de barras, donde la superficie de cada barra es proporcional al valor de los valores representados. Suelen utilizarse para comparar valores de una misma variable.

Ejemplo: nombre de jugador y puntuación.

Histograma

Representación gráfica de una variable en forma de barras, donde la superficie de cada barra es proporcional a la frecuencia de los valores representados.

Ejemplo: representar cuántos futbolistas hay para cada tramo de edad

Dispersión

Representación gráfica de una variable frente a otra, cada una en un eje diferente.

Ejemplo: puntuación general vs edad

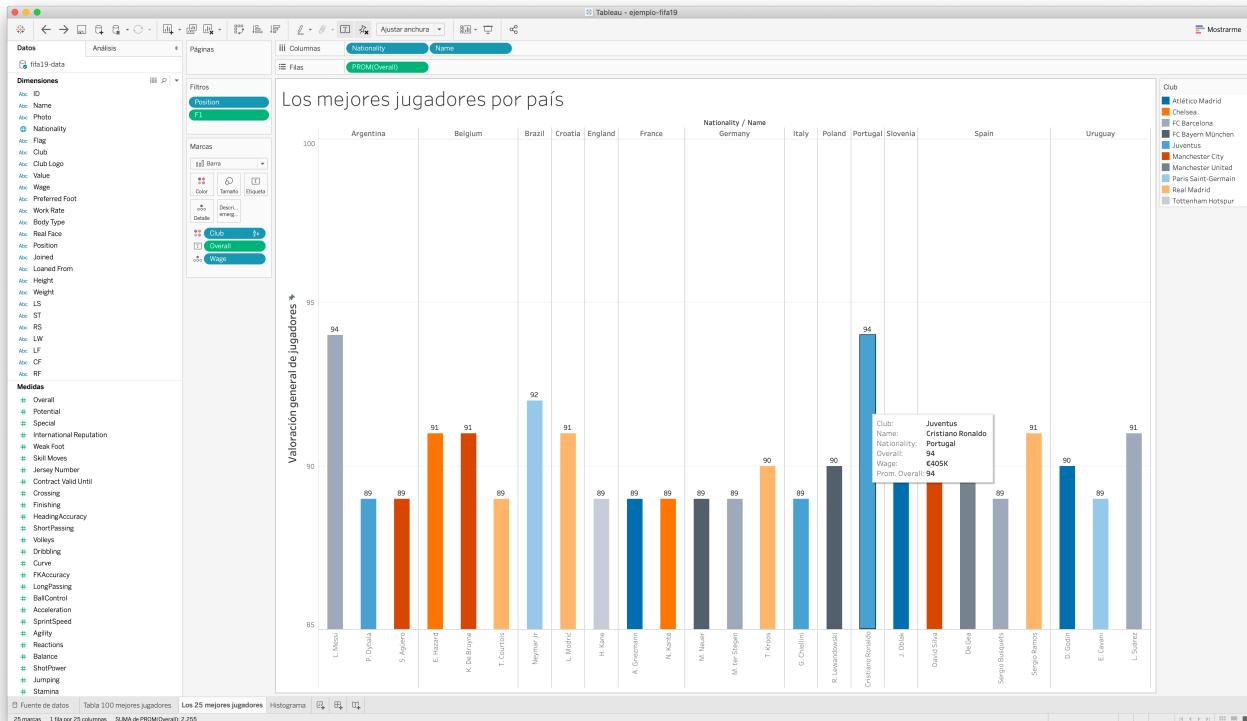
Bigotes (?)

Elemento importante dentro del modelo de empresa que se pretende analizar: ventas, pedidos, trabajadores, etc.

Ejemplo: futbolistas

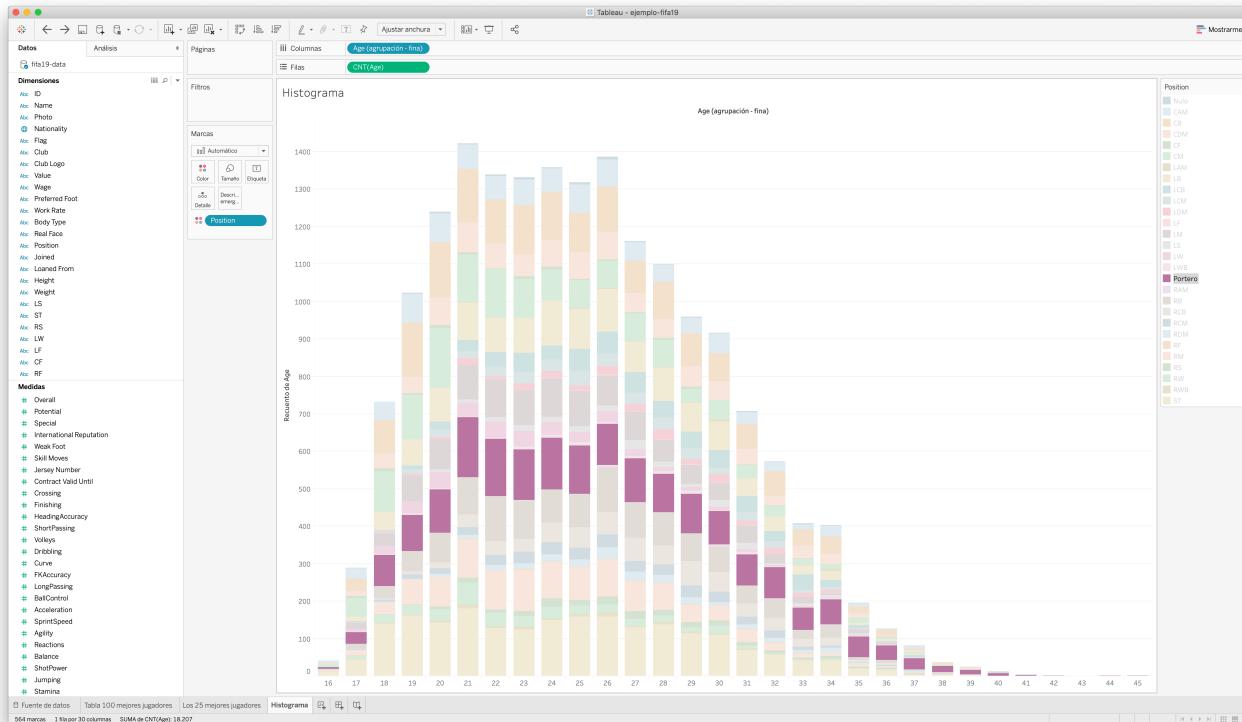
Tableau

Diagrama de barras



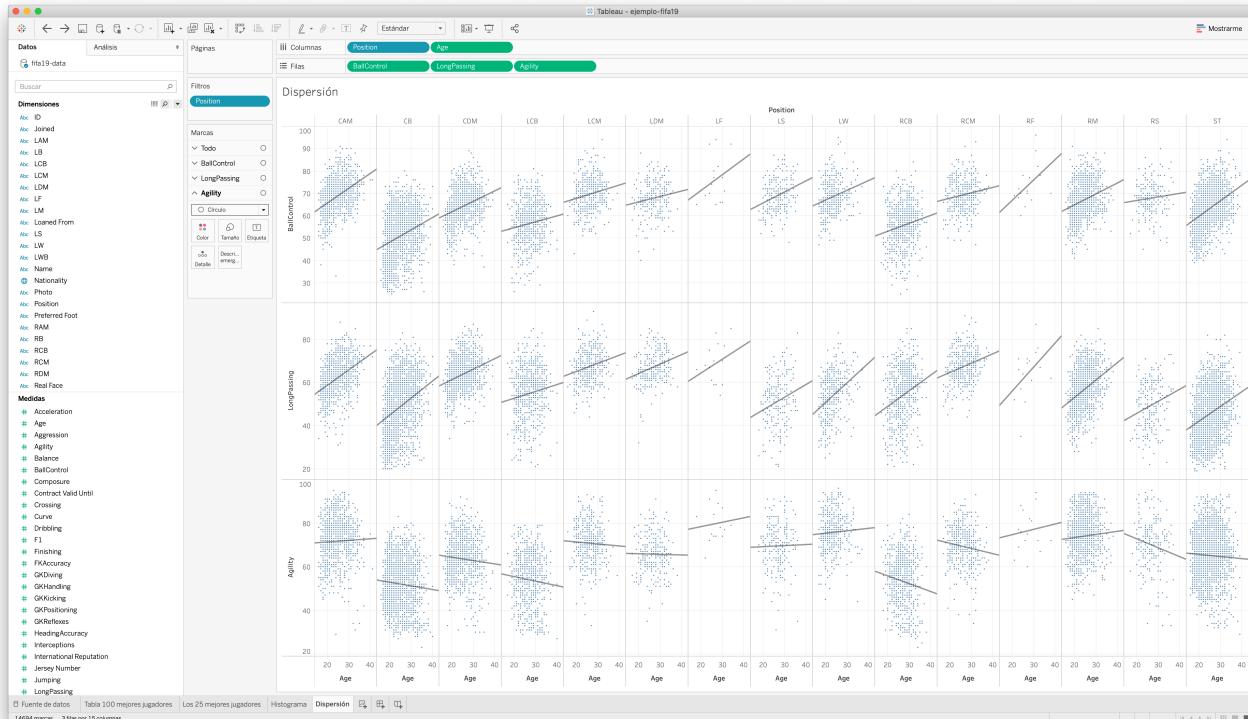
Tableau

Histograma



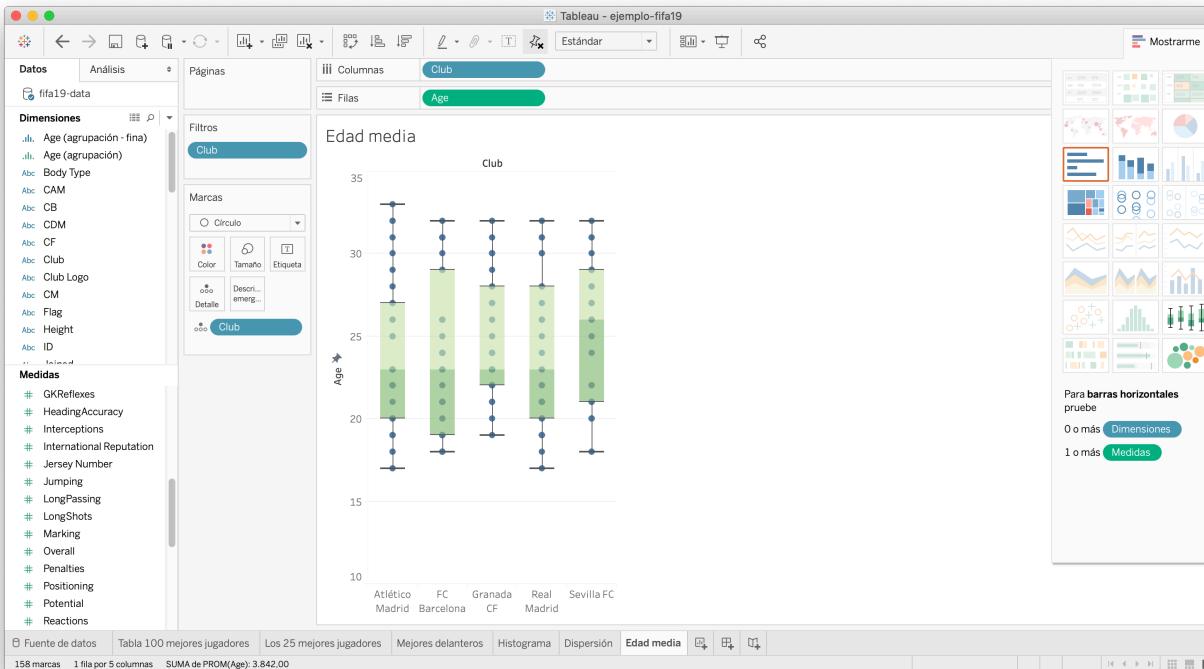
Tableau

Dispersión



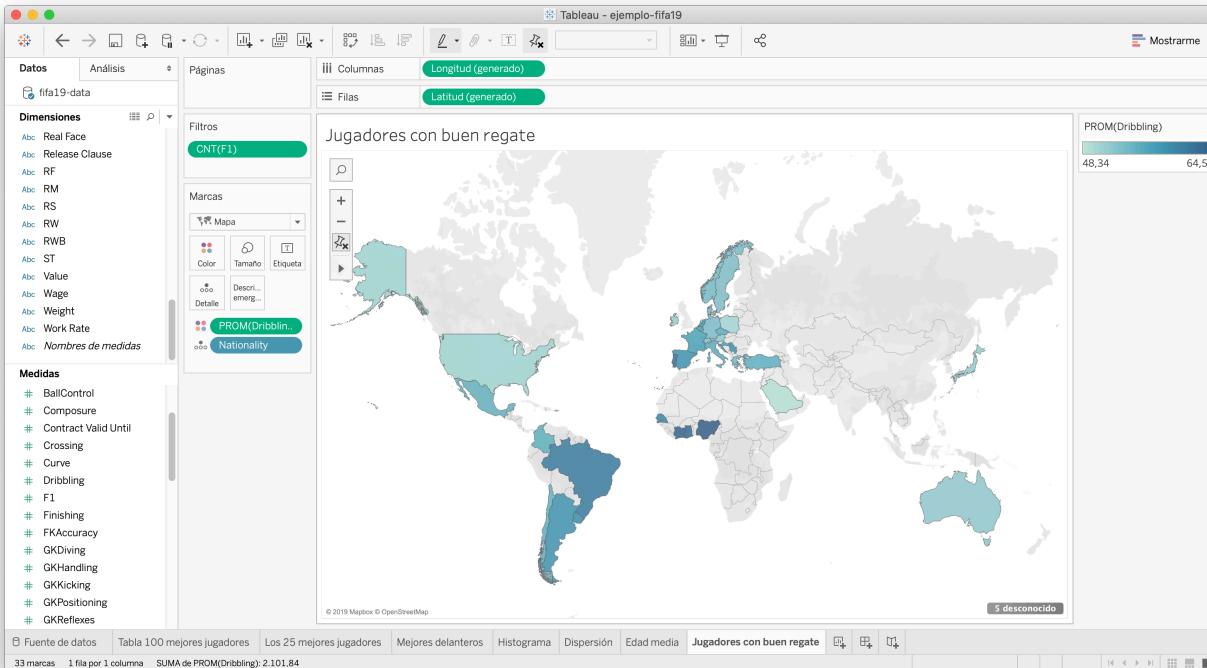
Tableau

Cajas y bigotes



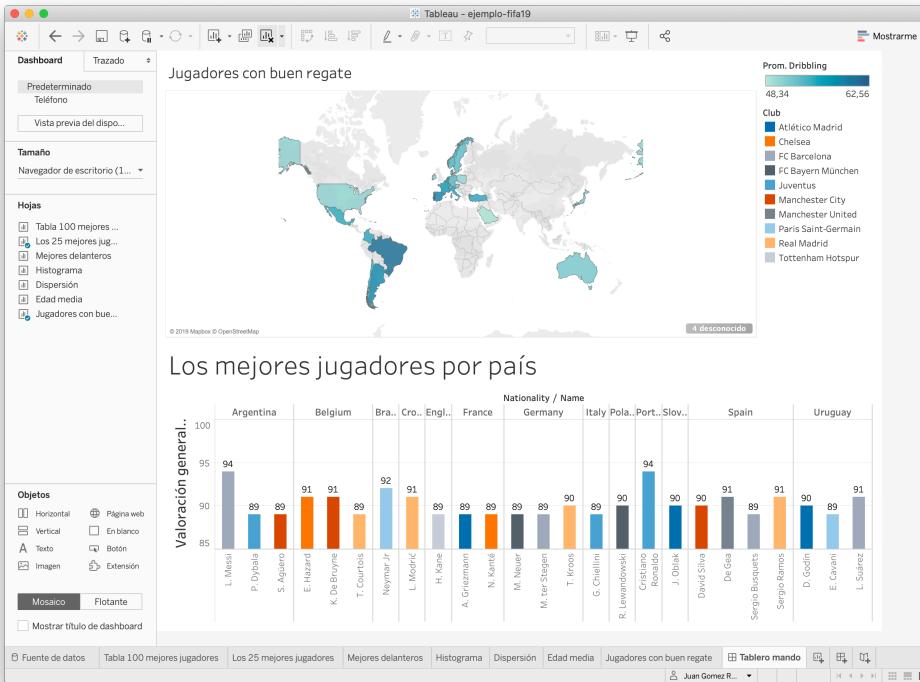
Tableau

Mapa



Tableau

Dashboard

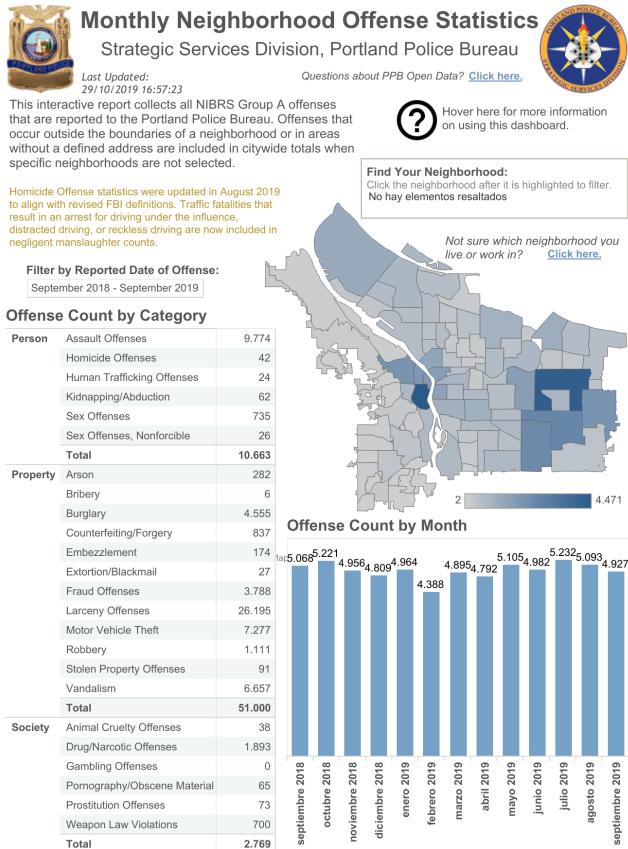


PORTLAND

EJERCICIO

Tableau

Dataset *portland_1972-2018*



Portland Police Bureau, *Monthly neighborhood offense Statistics*. 2019.

<https://www.portlandoregon.gov/police/71978>

Tableau

Dataset *portland_1972-2018*

<https://www.kaggle.com/katzwigmore/portland-oregon-crime-data/data>

* Case Number	The case year and number for the reported incident (YY-#####). Sensitive cases have been randomly assigned a case number and are denoted by an X following the case year (YY-X#####).
Occur Month Year	The Month and Year that the incident occurred.
* Occur Date	Date the incident occurred. The exact occur date is sometimes unknown. In most situations, the first possible date the crime could have occurred is used as the occur date. (For example, victims return home from a week-long vacation to find their home burglarized. The burglary could have occurred at any point during the week. The first date of their vacation would be listed as the occur date.)
Occur Time	Time the incident occurred. The exact occur time is sometimes unknown. In most situations, the first possible time the crime could have occurred is used as the occur time. The time is reported in the 24-hour clock format, with the first two digits representing hour (ranges from 00 to 23) and the second two digits representing minutes (ranges from 00 to 59).
* Address	Address of reported incident at the 100-block level (e.g.: 1111 SW 2nd Ave would be 1000 Block SW 2nd Ave). To protect the identity of victims and other privacy concerns, the address location of certain case types are not released.
Open Data X / Y	Generalized XY point of the reported incident. For offenses that occurred at a specific address, the point is mapped to the block's midpoint. Offenses that occurred at an intersection is mapped to the intersection centroid. To protect the identity of victims and other privacy concerns, the points of certain case types are not released. XY points use the Oregon State Plane North (3601), NAD83 HARN, US International Feet coordinate system.
* Open Data Lat / Lon	Generalized Latitude / Longitude of the reported incident. For offenses that occurred at a specific address, the point is mapped to the block's midpoint. Offenses that occurred at an intersection is mapped to the intersection centroid. To protect the identity of victims and other privacy concerns, the points of certain case types are not released.
* Neighborhood	Neighborhood where incident occurred. If the neighborhood name is missing, the incident occurred outside of the boundaries of the Portland neighborhoods or at a location that could not be assigned to a specific address in the system (e.g., Portland, near Washington Park, on the streetcar, etc.). Note: Neighborhood boundaries and designations vary slightly from those found on the Office of Neighborhood Involvement website.
* Crime Against	Crime against category (Person, Property, or Society)
* Offense Category	Category of offense (for example, Assault Offenses)
	Type of offense (for example, Aggravated Assault)
* Offense Type	Note: The statistic for Homicide Offenses has been updated in the Group A Crimes report to align with the 2019 FBI NIBRS definitions. The statistic for Homicide Offenses includes (09A) Murder & Non-negligent Manslaughter and (09B) Negligent Manslaughter. As of January 1, 2019, the FBI expanded the definition of negligent manslaughter to include traffic fatalities that result in an arrest for driving under the influence, distracted driving, or reckless driving. The change in definition impacts the 2019 homicide offenses statistic and the comparability of 2019 homicide statistics to prior year.
Offense Count	Number of offenses per incident. Offenses (i.e. this field) are summed for counting purposes.

Tableau

Carga de datos

The screenshot shows the Tableau Data Source interface. On the left, the 'Archivos' (Files) section lists 'portland_1972-2018.csv'. A note says 'Uso el interprete de datos' (Using the data source interpreter). On the right, the 'portland_1972-2018' connection is selected, showing its properties: 'Conexión' (Connection), 'Filtros' (Filters), and 'Atadir' (Append). The data preview shows offense records from March 1972 to 2018, with columns including Address, Case Number, Crime Against, Neighborhood, Occur Date, Occur Month Year, Occur Time, Offense Category, Offense Count, Offense Type, OpenDataLat, OpenDataLon, OpenDateX, OpenDateY, Report Date, and ReportMonthYear.

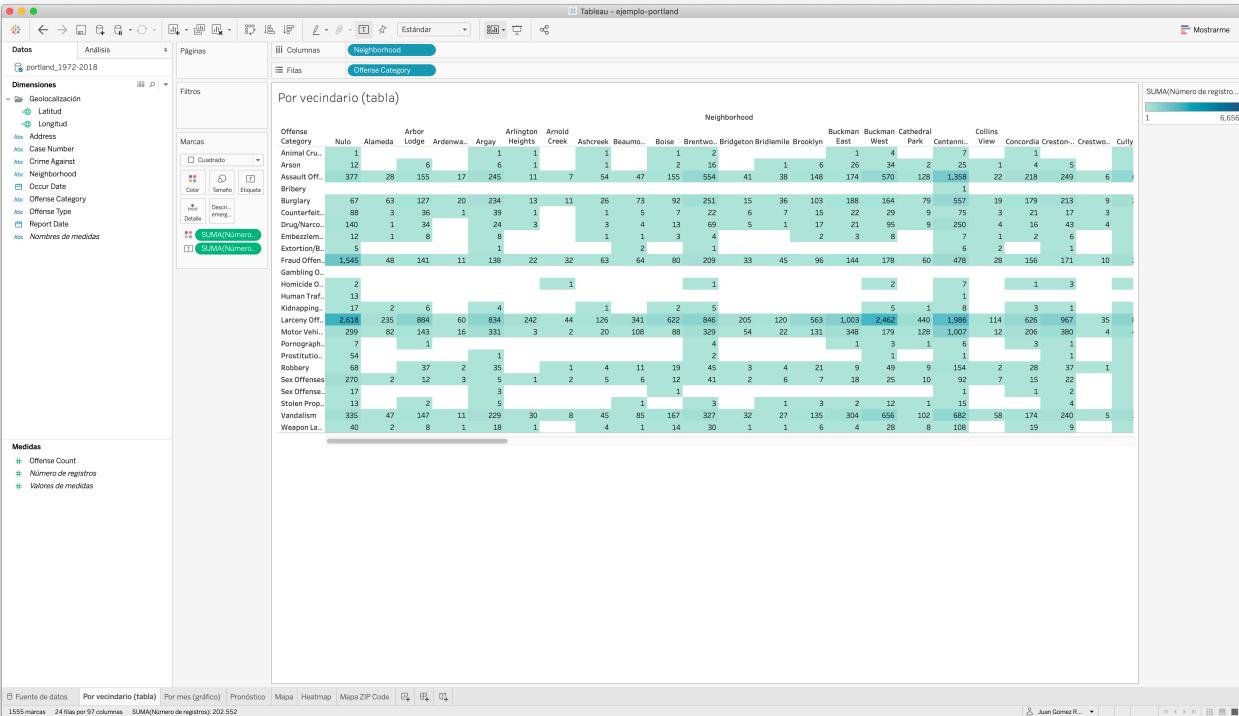
Address	Case Number	Crime Against	Neighborhood	Occur Date	Occur Month Year	Occur Time	Offense Category	Offense Count	Offense Type	OpenDataLat	OpenDataLon	OpenDateX	OpenDateY	Report Date	ReportMonthYear
1100 BLOCK OF SE 32...	17-88226	Property	Sunnyside	2/3/2017	3/1/2017		Motor Vehicle Theft	1,800	Motor Vehicle Theft	45.516474	-122.632405	7.655,554	680,949	24/3/2017	March 2017
SE TAYLOR ST & SE 40...	17-83832	Property	Sunnyside	4/3/2017	3/1/2017		Motor Vehicle Theft	1,517	Motor Vehicle Theft	45.515015	-122.621534	7.658,343	681,000	25/3/2017	March 2017
3500 BLOCK OF SE 8...	17-92189	Property	Sunnyside	25/9/2017	3/1/2017		Motor Vehicle Theft	1,200	Motor Vehicle Theft	45.516494	-122.627659	7.656,798	681,580	27/3/2017	March 2017
SE CESAR E CHAVEZ ...	17-75887	Property	Sunnyside	9/10/2016	10/1/2016		Motor Vehicle Theft	1,200	Motor Vehicle Theft	45.517069	-122.62301	7.657,992	682,050	18/3/2017	March 2017
5700 BLOCK OF N AM...	17-82455	Property	University Park	18/9/2017	3/1/2017		Motor Vehicle Theft	2,000	Motor Vehicle Theft	45.579394	-122.730409	7.651,080	705,216	19/3/2017	March 2017
7400 BLOCK OF N MC...	17-85938	Property	University Park	20/3/2017	3/1/2017		Motor Vehicle Theft	100	Motor Vehicle Theft	45.583331	-122.729047	7.631,479	706,568	29/3/2017	March 2017
5200 BLOCK OF N I.O...	17-82827	Property	University Park	24/4/2017	3/1/2017		Motor Vehicle Theft	1,130	Motor Vehicle Theft	45.581723	-122.722118	7.633,238	706,006	24/3/2017	March 2017
15100 BLOCK OF NE 1...	17-65845	Property	Wilkes	4/3/2017	3/1/2017		Motor Vehicle Theft	2,300	Motor Vehicle Theft	45.506463	-122.506463	7.688,132	692,410	5/3/2017	March 2017
16100 BLOCK OF NE 1...	17-66512	Property	Wilkes	5/3/2017	3/1/2017		Motor Vehicle Theft	2,130	Motor Vehicle Theft	45.549572	-122.496497	7.690,695	692,779	6/3/2017	March 2017
3600 BLOCK OF NE 1...	17-75322	Property	Wilkes	12/9/2017	3/1/2017		Motor Vehicle Theft	1,920	Motor Vehicle Theft	45.549857	-122.499999	7.690,814	692,428	18/3/2017	March 2017
1500 BLOCK OF NE 1...	17-87806	Property	Wilkes	15/9/2017	3/1/2017		Motor Vehicle Theft	2,100	Motor Vehicle Theft	45.534036	-122.504994	7.688,386	687,170	16/3/2017	March 2017
900 BLOCK OF NE 10...	17-80332	Property	Woodlawn	16/9/2017	3/1/2017		Motor Vehicle Theft	1,700	Motor Vehicle Theft	45.570278	-122.655954	7.650,163	701,373	17/3/2017	March 2017
7000 BLOCK OF NE M...	17-81891	Property	Woodlawn	18/9/2017	3/1/2017		Motor Vehicle Theft	1,700	Motor Vehicle Theft	45.578947	-122.661331	7.648,724	702,713	18/3/2017	March 2017
7400 BLOCK OF NE M...	17-83017	Property	Woodlawn	19/3/2017	3/1/2017		Motor Vehicle Theft	2,000	Motor Vehicle Theft	45.576857	-122.661293	7.648,758	703,810	19/3/2017	March 2017
6100 BLOCK OF SE 52...	17-69492	Property	Woodstock	6/3/2017	3/1/2017		Motor Vehicle Theft	1,300	Motor Vehicle Theft	45.478068	-122.60879	7.661,257	667,448	6/3/2017	March 2017
5700 BLOCK OF SE W...	17-74519	Property	Woodstock	10/3/2017	3/1/2017		Motor Vehicle Theft	1,100	Motor Vehicle Theft	45.479324	-122.604348	7.662,406	667,803	12/3/2017	March 2017
5200 BLOCK OF SE W...	17-83616	Property	Woodstock	20/3/2017	3/1/2017		Motor Vehicle Theft	1,157	Motor Vehicle Theft	45.479121	-122.608236	7.661,409	667,828	20/3/2017	March 2017
5500 BLOCK OF SE 41...	17-56833	Property	Woodstock	22/2/2017	3/1/2017		Motor Vehicle Theft	0	Motor Vehicle Theft	45.480242	-122.620644	7.658,259	669,114	22/3/2017	March 2017
5600 BLOCK OF SE 56...	17-99607	Property	Woodstock	23/3/2017	3/1/2017		Motor Vehicle Theft	230	Motor Vehicle Theft	45.482334	-122.605945	7.662,035	668,931	25/3/2017	March 2017
5600 BLOCK OF SE 41...	17-96294	Property	Woodstock	30/3/2017	3/1/2017		Motor Vehicle Theft	1,800	Motor Vehicle Theft	45.481707	-122.620640	7.658,251	668,854	31/3/2017	March 2017
10000 BLOCK OF NE 1...	18-81292	Property	nulo	10/3/2018	3/1/2018		Motor Vehicle Theft	1,000	Motor Vehicle Theft	45.573866	-122.559282	7.674,853	701,855	11/3/2018	March 2018
7000 BLOCK OF NE C...	18-85323	Property	nulo	9/3/2018	3/1/2018		Motor Vehicle Theft	1,600	Motor Vehicle Theft	45.574288	-122.562878	7.673,925	702,215	14/3/2018	March 2018

Descargar: <https://github.com/jgromero/dataviz19>

Propiedades del archivo de texto >
Separador de campos

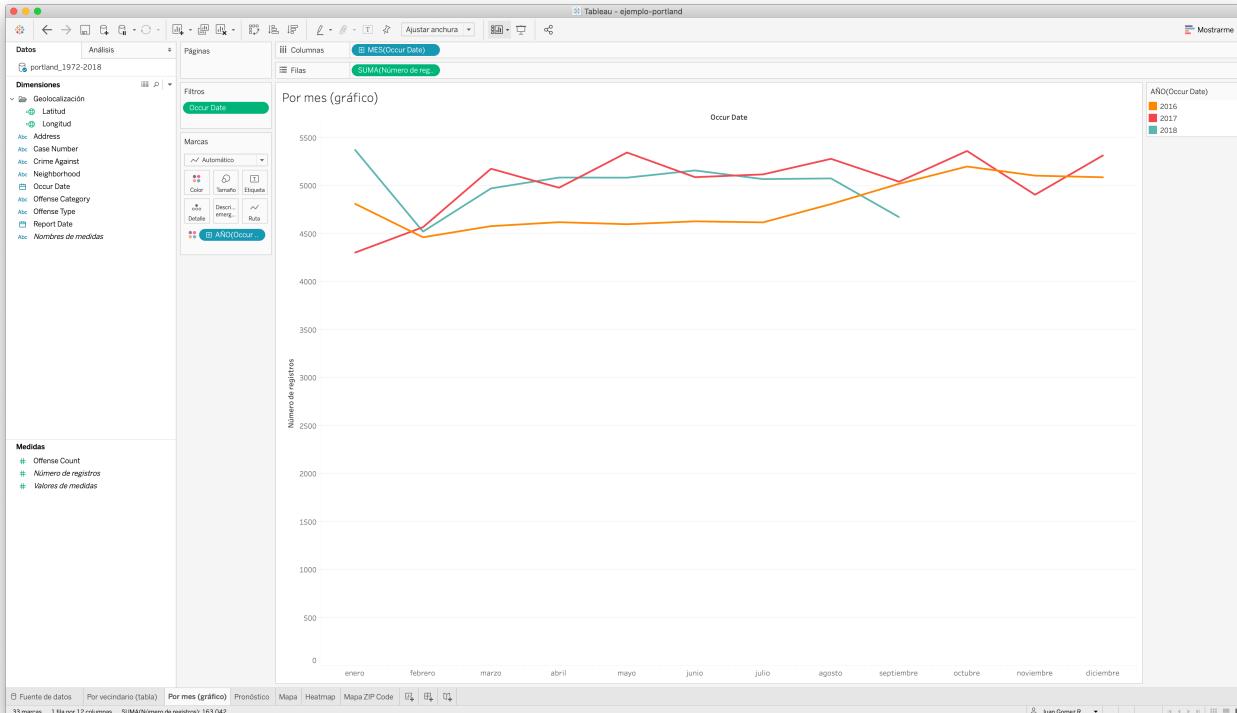
Tableau

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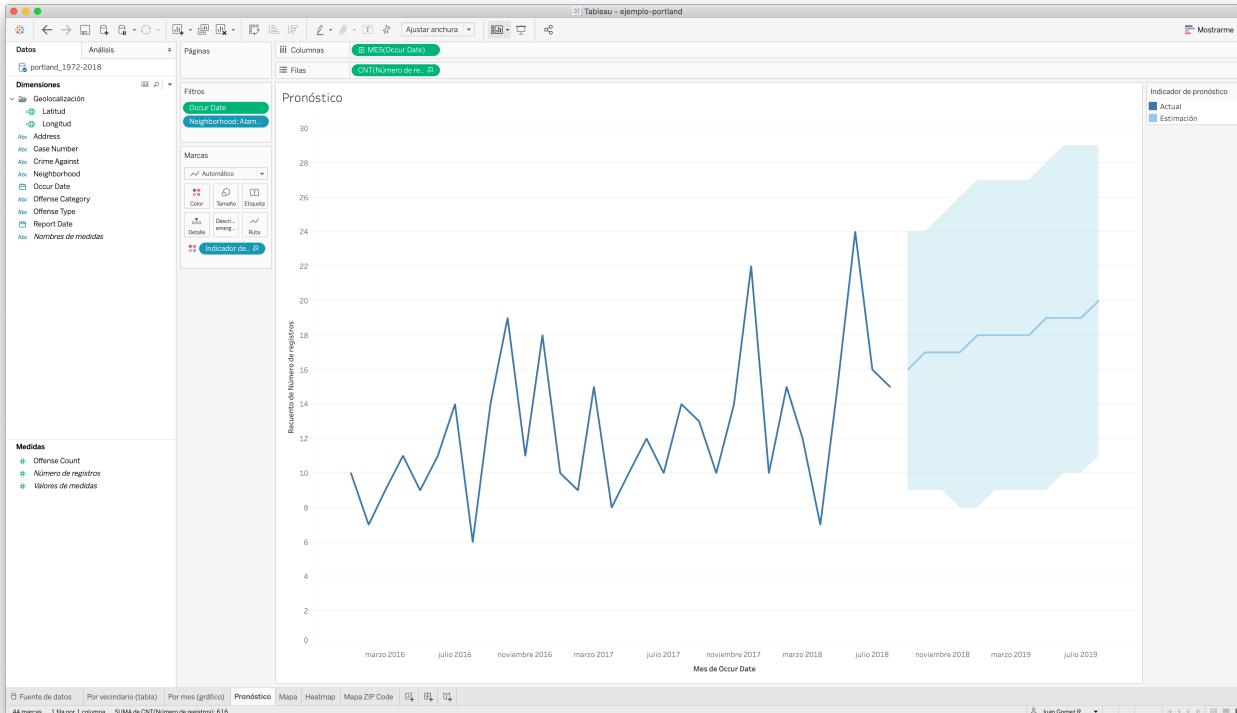
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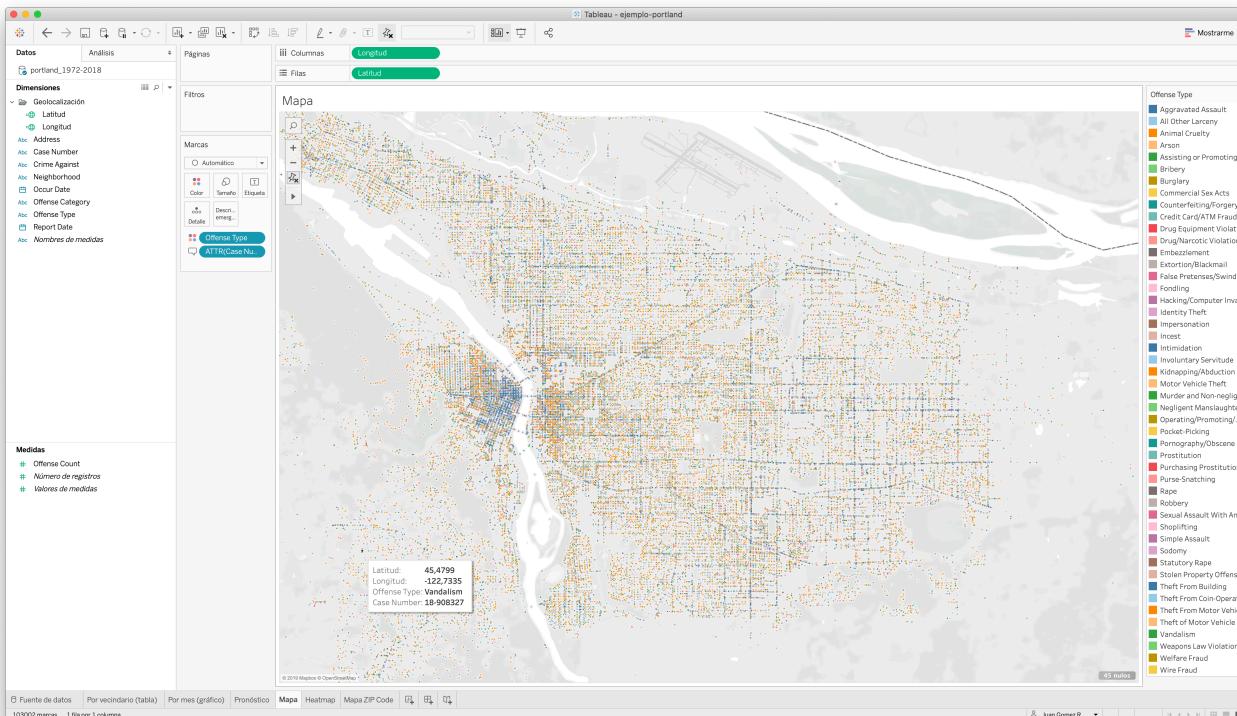
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Pronóstico



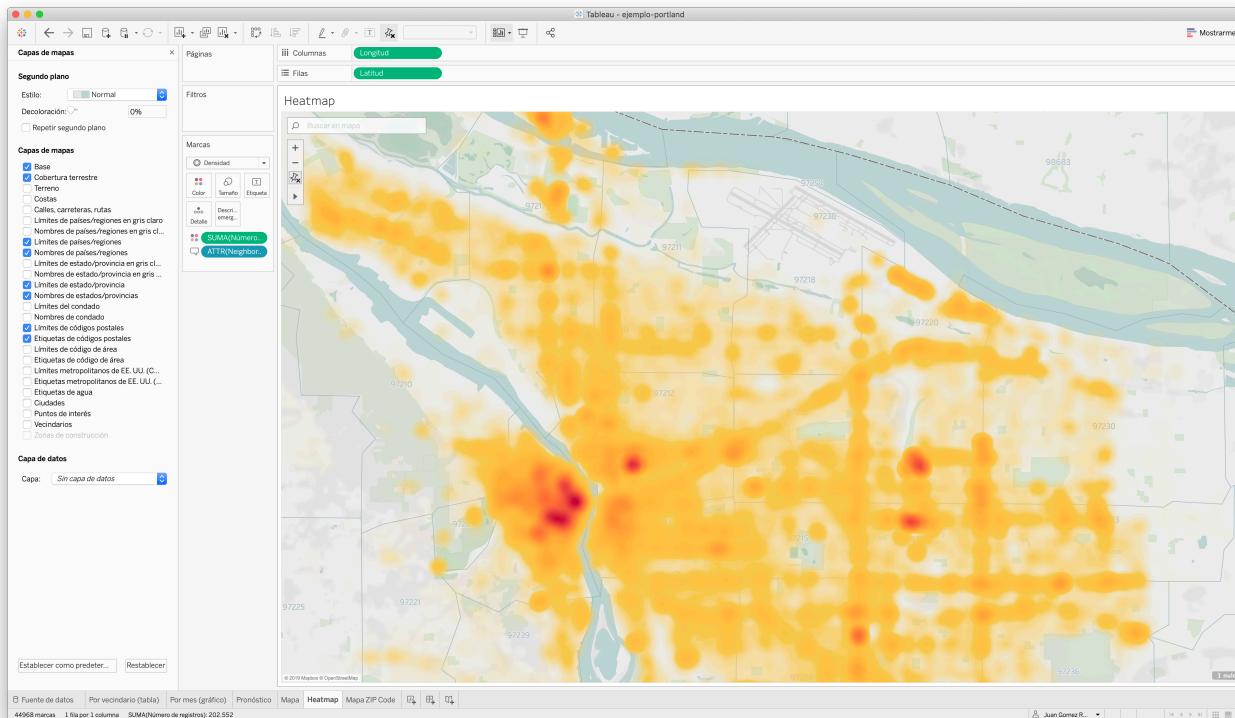
Tableau

Mapa



Tableau

Heatmap



Tableau

Divisiones personalizadas

