

MEJORA
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INNOVACIÓN

CONFIANZA

EQUIPO



Inycom

innovation technologies

ANALÍTICA E INTELIGENCIA DE DATOS

COMPROMETIDOS CON
TU FUTURO

COMPROMISO

CUSTOMER
EXPERIENCE

LIFE CARE
INTEGRATION

TRANSFORMACIÓN
DIGITAL

PÉS PARA CIMA, AMANTES
DAS DIVERSÕES DO WALLY!
NOSSA! EU PERDI TODAS
AS MINHAS COISAS, UMA
EM CADA LUGAR. AGORA
VOCÊS PRECISAM VOLTAR
E PROCURÁ-LAS. E, EM
ALGUM LUGAR, UM DOS
OBSERVADORES DO WALLY
PERDEU O POMPOM DE SEU
CHAPÉU. VOCÊS CONSEGUEM
VER QUEM É E ENCONTRAR
O POMPOM QUE FALTA?

Wally



PARA:
AMANTES DAS
DIVERSÕES DO WALLY
DE VOLTA AO INÍCIO,
COMECE DE NOVO,
EXCELENTE



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Global data volumen in Zettabytes

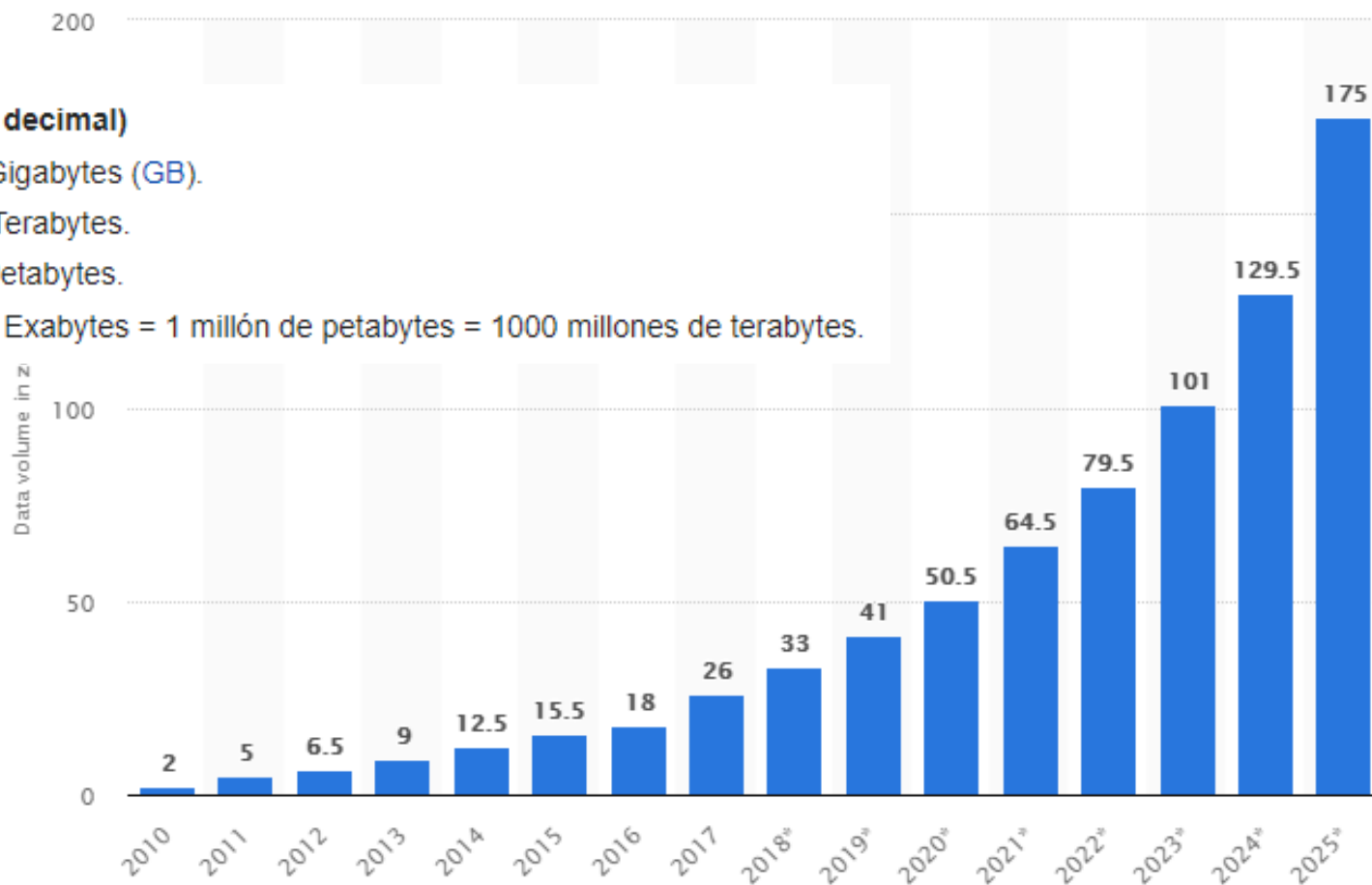
Equivalencias (en sistema decimal)

1 Terabyte (TB) = 1000 Gigabytes (GB).

1 Petabyte (PB) = 1000 Terabytes.

1 Exabyte (EB) = 1000 Petabytes.

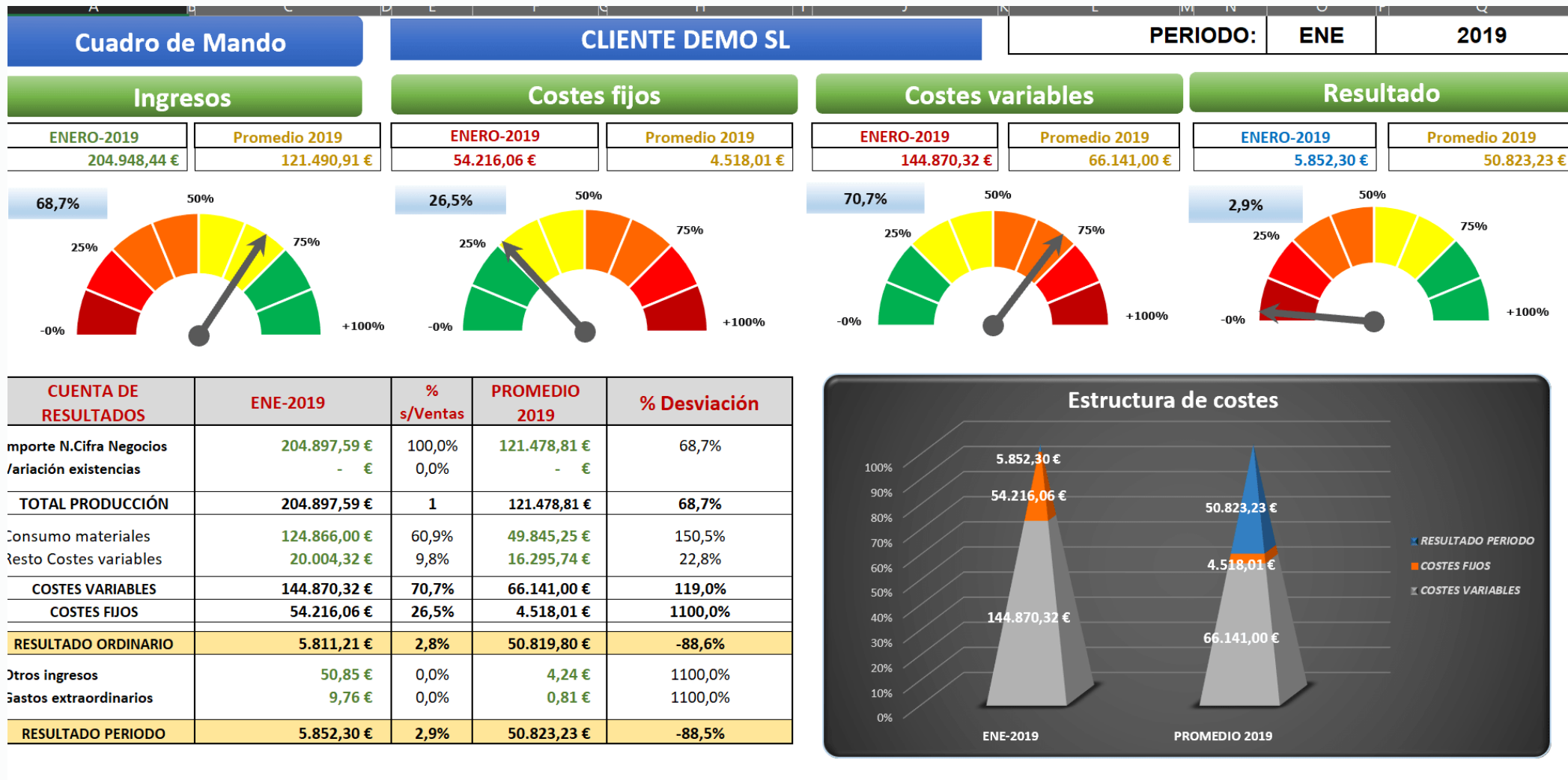
1 **Zettabyte** (ZB) = 1000 Exabytes = 1 millón de petabytes = 1000 millones de terabytes.



Evolución de la analítica de datos

| Band ID | Album ID | Title | Label ID | Style | Release Month | Round Year | Year | Sales |
|---------|----------|---------------------------------------|----------|------------------|---------------|------------|---------|------------|
| 6 | 1 | Led Zeppelin | 1 | Blues Rock | 12/01/1969 | 1969 | 1969,00 | 15.800.000 |
| 6 | 2 | Led Zeppelin II | 1 | Hard Rock | 22/10/1969 | 1969 | 1969,75 | 21.900.000 |
| 6 | 3 | Led Zeppelin III | 1 | Classic Rock | 05/10/1970 | 1970 | 1970,75 | 13.700.000 |
| 6 | 4 | Led Zeppelin IV | 1 | Hard Rock | 08/11/1971 | 1971 | 1971,75 | 37.000.000 |
| 6 | 5 | Houses of the Holy | 1 | Classic Rock | 28/03/1973 | 1973 | 1973,00 | 17.700.000 |
| 6 | 6 | Physical Graffiti | 1 | Classic Rock | 24/02/1975 | 1975 | 1975,00 | 13.400.000 |
| 6 | 7 | Presence | 1 | Hard Rock | 31/03/1976 | 1976 | 1976,00 | 7.300.000 |
| 6 | 8 | In Through the Out Door | 1 | Hard Rock | 15/09/1979 | 1979 | 1979,50 | 11.500.000 |
| 6 | 9 | Coda | 1 | Hard Rock | 19/11/1982 | 1982 | 1982,75 | 3.400.000 |
| 8 | 10 | Please Please Me | 2 | Beat | 22/03/1963 | 1963 | 1963,00 | 5.900.000 |
| 8 | 11 | With the Beatles | 2 | Rock & Roll | 22/11/1963 | 1963 | 1963,75 | 5.850.000 |
| 8 | 12 | A Hard Day's Night | 2 | Pop Rock | 10/07/1964 | 1964 | 1964,50 | 9.350.000 |
| 8 | 13 | Beatles for Sale | 2 | Rock & Roll | 04/12/1964 | 1964 | 1964,75 | 5.650.000 |
| 8 | 14 | Help! | 2 | Soundtrack | 06/08/1965 | 1965 | 1965,50 | 9.850.000 |
| 8 | 15 | Rubber Soul | 2 | Pop Rock | 03/12/1965 | 1965 | 1965,75 | 14.400.000 |
| 8 | 16 | Revolver | 2 | Psychedelic Rock | 05/08/1966 | 1966 | 1966,50 | 12.450.000 |
| 8 | 17 | Sgt. Pepper's Lonely Hearts Club Band | 2 | Rock & Roll | 26/05/1967 | 1967 | 1967,25 | 24.800.000 |
| 8 | 18 | Magical Mystery Tour | 2 | Soundtrack | 27/11/1967 | 1967 | 1967,75 | 10.600.000 |
| 8 | 19 | The Beatles | 3 | Pop Rock | 22/11/1968 | 1968 | 1968,75 | 31.000.000 |

Evolución de la analítica de datos



Evolución de la analítica de datos

Administrador de informes - Windows Internet Explorer
Ntp://localhost:8080/Reports/Pages/Report.aspx?DenPath=%2FAventureWorks+Sample+Report

SQL Server Reporting Services
Inicio > AdventureWorks Sample Report
Inicio | Mis suscripciones | Configuración del sitio | Ayuda
Buscar:

Ver: [Propiedades](#) | [Historial](#) | [Suscripciones](#)

14 de 1 de 1 | 100% | Buscar | Siguientes | Seleccionar un formato | Exportar

| Product Category | Sub Category | North America | | | Europe | | |
|------------------|-----------------|---------------|--------------|---------------|--------------|--------------|--------------|
| | | 2003 | 2004 | Total | 2004 | 2003 | Total |
| Components | Headsets | 21635.1226 | | 21635.1226 | | 3416.7684 | 3416.7684 |
| | Bottom Brackets | 21430.2660 | 14643.2880 | 36073.5540 | 4640.8380 | 6714.1440 | 11354.9820 |
| | Road Frames | 1368828.6457 | 285045.7800 | 1653874.4257 | 71650.6796 | 263607.3840 | 335258.0636 |
| | Chains | 3748.0432 | 2368.0800 | 6116.1232 | 922.9440 | 1496.5456 | 2419.4896 |
| | Touring Frames | 626173.3505 | 371819.8260 | 997993.1765 | 189998.9340 | 330769.0574 | 520767.9914 |
| | Forks | 24615.8700 | | 24615.8700 | | 3643.2000 | 3643.2000 |
| | Mountain Frames | 1696904.4451 | 670285.4940 | 2367189.9391 | 189574.2180 | 350432.2259 | 540006.4439 |
| | Saddles | 28260.0460 | 12702.8496 | 40962.8956 | 4446.8280 | 8162.4000 | 12609.2280 |
| | Pedals | 75311.4174 | 44504.0326 | 119815.4500 | 8600.8080 | 17412.2400 | 26013.0480 |
| | Brakes | 30113.9400 | 14121.9000 | 44235.8400 | 4920.3000 | 11346.5100 | 16266.8100 |
| | Handlebars | 71934.4718 | 21685.8480 | 93620.3198 | 5662.1280 | 14913.2050 | 20575.3330 |
| | Cranksets | 82835.9632 | 53150.4660 | 135986.4292 | 19066.8000 | 32172.1620 | 51238.9620 |
| | Derailleurs | 28050.4942 | 17516.7628 | 45567.2570 | 5645.5500 | 11721.4190 | 17366.9690 |
| | Wheels | 205416.3255 | | 205416.3255 | | 23460.7358 | 23460.7358 |
| | Total | 4285258.4012 | 1507844.3270 | | 505130.0276 | 1079267.9971 | |
| Bikes | Road Bikes | 10927549.3612 | 4623799.5668 | 15551348.9280 | 1705822.2694 | 2918493.8806 | 4624316.1500 |
| | Mountain Bikes | 9127110.9834 | 5017247.6885 | 14144358.6719 | 1951267.3702 | 2481876.9460 | 4433144.3162 |

Listo Intranet local 100%

Evolución de la analítica de datos



Evolución de la analítica de datos

London

51.51 N, 0.13 W

Mon 9 Dec @ 16:02:42

Go to Map - Go to Grid - Change City

WEATHER STATIONS (MULTIPLE SOURCES) 5

| STATION | WIND SPEED | WIND GUSTS | DIRECTION | TEMPERATURE | HUMIDITY | RAIN TODAY | PRESSURE | FORECAST |
|-----------------------------|------------|------------|-----------|-------------|----------|------------|-------------|-------------|
| CASA Office: Bloomsbury W1 | 8 mph | 9 mph | SE ↘ | 11.5 °C | 76% | 0.0 mm | 1027.9 mbar | Clear Night |
| Lambeth Meters: Brixton SW9 | 4.3 mph | 4.3 mph | SW ↗ | 11.0 °C | 83% | 0.0 mm | 1026.4 mbar | Clear Night |
| Hampstead NW3 | 3.6 mph | 3.6 mph | S ↑ | 9.8 °C | 84% | 0.0 mm | 1029.0 mbar | Clear Night |

WEATHER (METAR) 848

London City Airport

Mostly clear **SW at 3 mph** **11 C**

FORECAST (YAHOO! WTH) 1748

| Mon | Tue |
|--------------|---------------|
| 10 C | 9 C |
| Mostly Clear | Partly Cloudy |

TUBE LINE STATUS (TfL) 39

| | |
|--------------|--------------|
| Bakerloo | Good Service |
| Central | Good Service |
| Circle | Good Service |
| District | Good Service |
| H & C | Good Service |
| Jubilee | Good Service |
| Metropolitan | Good Service |
| Northern | Good Service |
| Piccadilly | Good Service |
| Victoria | Good Service |
| W & C | Good Service |
| Overground | Good Service |
| DLR | Good Service |

BIKE SHARING (TfL) 38

| | |
|-----------------|-----------------------|
| 4.3 % | 4.9 % |
| Stations Full | Stations Empty |
| 7354 | 430 |
| Bikes Available | Bikes or Docks Faulty |

Available Bikes (last 24h)

IN SERVICE (TfL) 9

| |
|--------------------|
| 7197 |
| London buses |
| 378 |
| Underground trains |

AIR POLLUTION (DEFRA) 1748

| µg/m³ TIME AVOID | OZONE | NO ₂ | SO ₂ | PM _{2.5} | PM ₁₀ |
|------------------|-------|-----------------|-----------------|-------------------|------------------|
| Bloomsbury | 13 | 38 | 4 | 9 | 10 |
| Marylebone Rd | 9 | 16 | 26 | 22 | 34 |
| N Kensington | 14 | 40 | ? | 12 | 18 |

RADS (CASA) 1

6
cpm (uncalibrated)

RIVER LEVEL (PLA) 248

4.13
metres

STOCKS (YAHOO) 7

6552.34
+0.35 (0.01%)

RANDOM TRAFFIC CAMERAS (TfL) 10

Old Kent Rd/Asylum Rd

High St/Grosvenor Rd W Wickham

BBC LONDON NEWS (BBC) 48

Rigby killer 'a soldier of Allah' Mayor bike 'scaring' claim withdrawn Murder police found grave in garden Cameron praises 'towering' Mandela Police crackdown on pirate site ads Why do we value gold?

OPENSTREETMAP UPDATES (OSM) 248

Third attempt to name the terraced cottages around the Green. Revert my change to terraced cottages as they get rendered with wrong address. Added Tilet Foundation refining Name error.

ELECTRICITY (N.GRID) 29

48211
MW

MOOD (LSE MAPPINESS) 38

| | |
|---|--|
| 8% | 13% |
| unhappier than the long term average for here | happier than the whole country right now |

TWITTER TRENDS FOR LONDON 198

MPs #NFL Christmas #Confident Xmas #ashes London #RIPAlexTurner #12DaysofJonesDAY9 Waca

innovation technologies

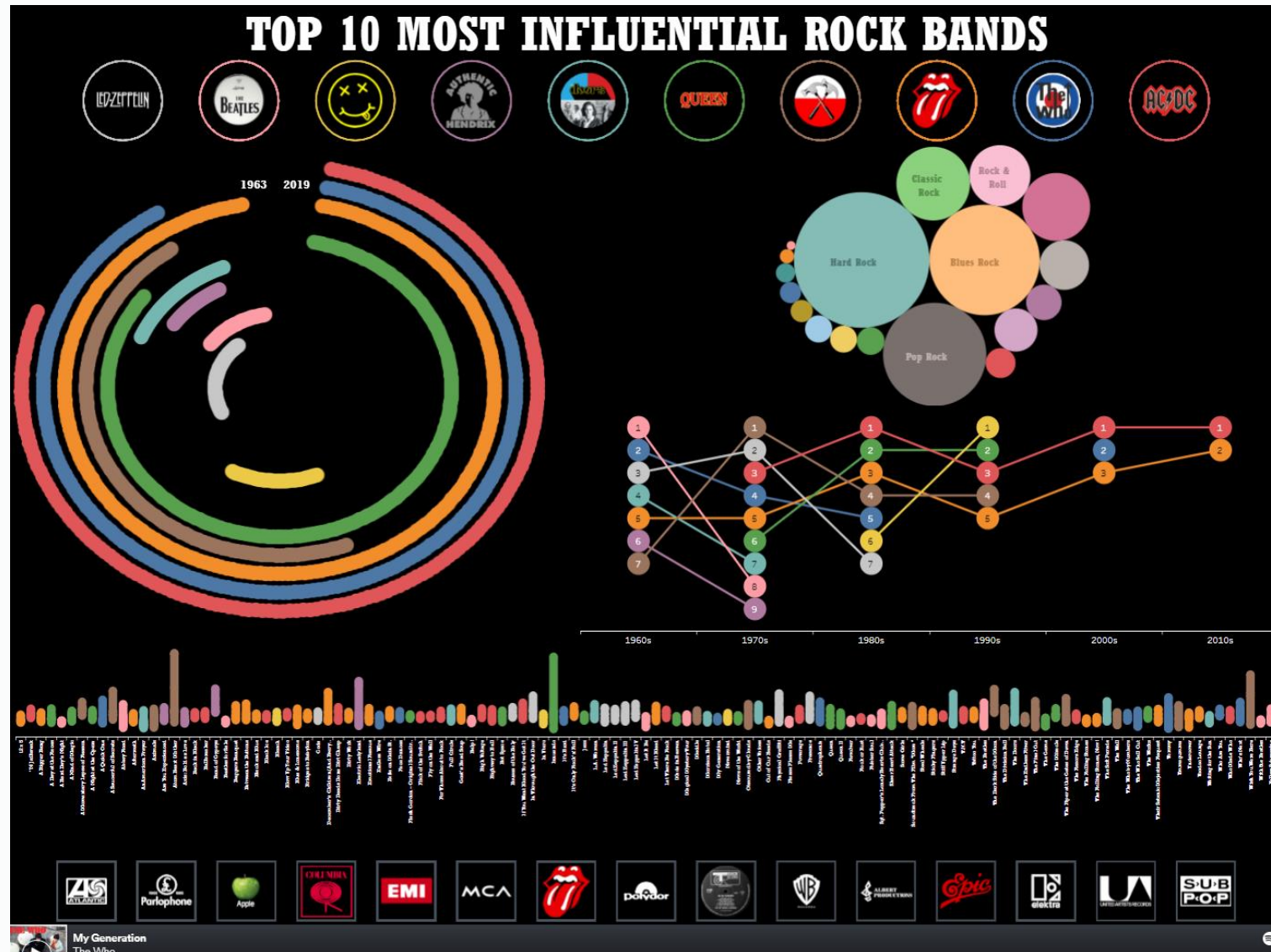
www.inycom.es

// 9

Evolución de la analítica de datos



Evolución de la analítica de datos



La Información es Bella





**Conexiones,
proximidad, color,
tamaño y forma**

1

2

3

4

Cómo ayudar a nuestro cerebro

8 4 5 1 5 1 5 3 5 1 5 6 4 9 0 9 7
3 4 9 7 3 9 4 7 3 6 7 5 2 1 4 3 2
8 7 4 5 8 7 3 2 6 4 8 7 1 2 3 6 4
8 7 2 6 5 4 8 1 7 6 3 2 8 4 7 6 2
8 3 7 5 6 8 4 5 9 3 2 1 4 6 3 9 8
6 5 6 1 5 4 9 3 6 5 9 1 8 6 4 9 5

Cómo ayudar a nuestro cerebro

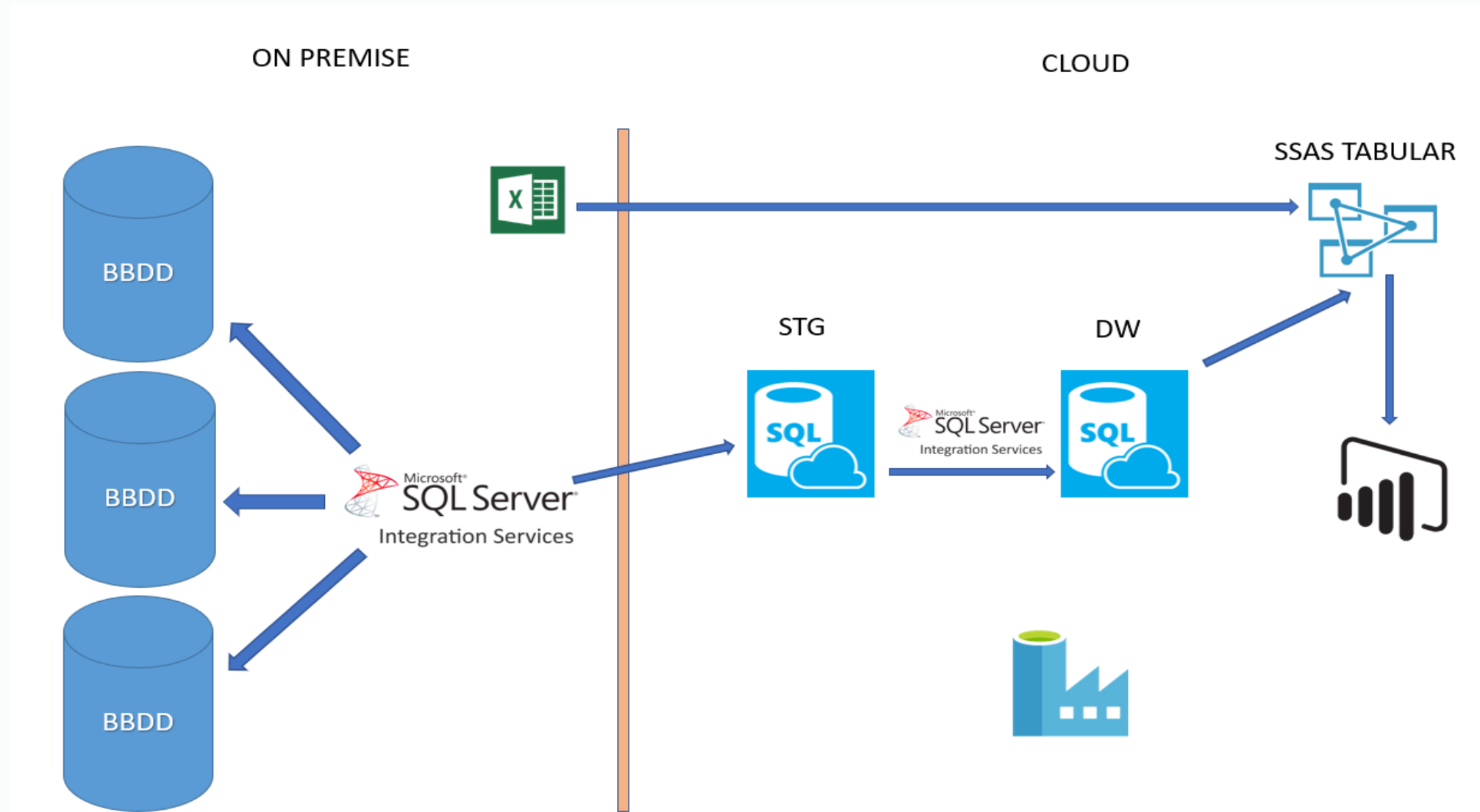
8 4 5 1 5 1 5 3 5 1 5 6 4 9 0 9 7
3 4 9 7 3 9 4 7 3 6 7 5 2 1 4 3 2
8 7 4 5 8 7 3 2 6 4 8 7 1 2 3 6 4
8 7 2 6 5 4 8 1 7 6 3 2 8 4 7 6 2
8 3 7 5 6 8 4 5 9 3 2 1 4 6 3 9 8
6 5 6 1 5 4 9 3 6 5 9 1 8 6 4 9 5

BI Project Solution Scope

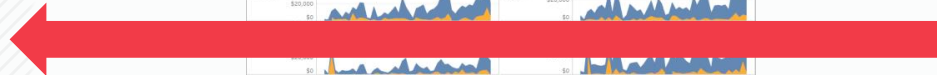
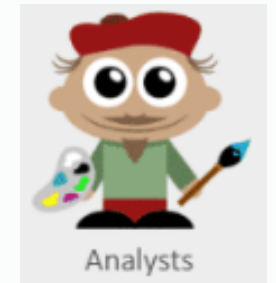
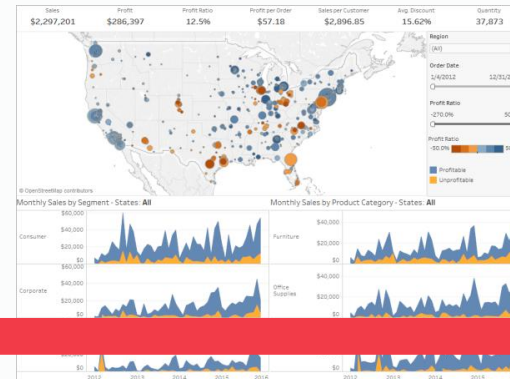
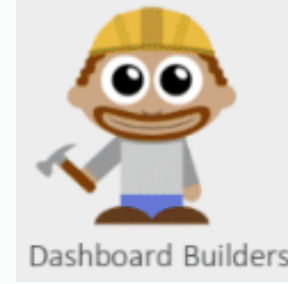
- Server-Hosted Data Model
- Dimensional Data Mart
- Data Transformation Process
- Master Data Management

- BI Dashboards
- Interactive Reports

Arquitecturas de datos



Perfiles en la analítica de datos



ENGAGEMENT PROCESS

Step 1: Build the Data Model



Step 2: Define The Report



Step 3: Generate SQL commands



Step 4: Create Report



Data Warehouse

The data warehouse is a "schema-on-load" approach because the data schema must be defined and built prior to loading data into the data warehouse. Without an underlying data model, the BI tools will not work.

Business Intelligence Questions

What happened?

Descriptive Analysis

Standard Reporting



Business Intelligence Analyst

VS

Data Science Questions

Why? What will happen?
What should I do?

Predictive Analysis

Prescriptive Analysis



Data Scientist

DIFFERENCE BETWEEN BUSINESS INTELLIGENCE AND DATA SCIENCE

CHARACTERISTICS

| | | |
|--------------|-----------------------------|--|
| Focus | Reports, KPIs, trends | Patterns, correlations, models |
| Process | Static, comparative | Exploratory, experimentation, visual |
| Data Sources | Pre-planned, added slowly | On the fly, as-needed |
| Transform | Up front, carefully planned | In-database, on-demand, enrichment |
| Data quality | Single version of truth | "Good enough," probabilities |
| Data model | Schema on load | Schema on query |
| Analytics | Retrospective, Descriptive | Predictive, Prescriptive, Preventative |

ENGAGEMENT PROCESS

Step 1: Define Hypothesis to Test



Step 2: Gather Data



Step 3: Build Data Model



Step 4: Explore the Data



Step 5: Build and Refine Analytic Models



Step 6: Ascertain Goodness of Fit



repeat

La nueva era de la visualización

Los datos son atractivos

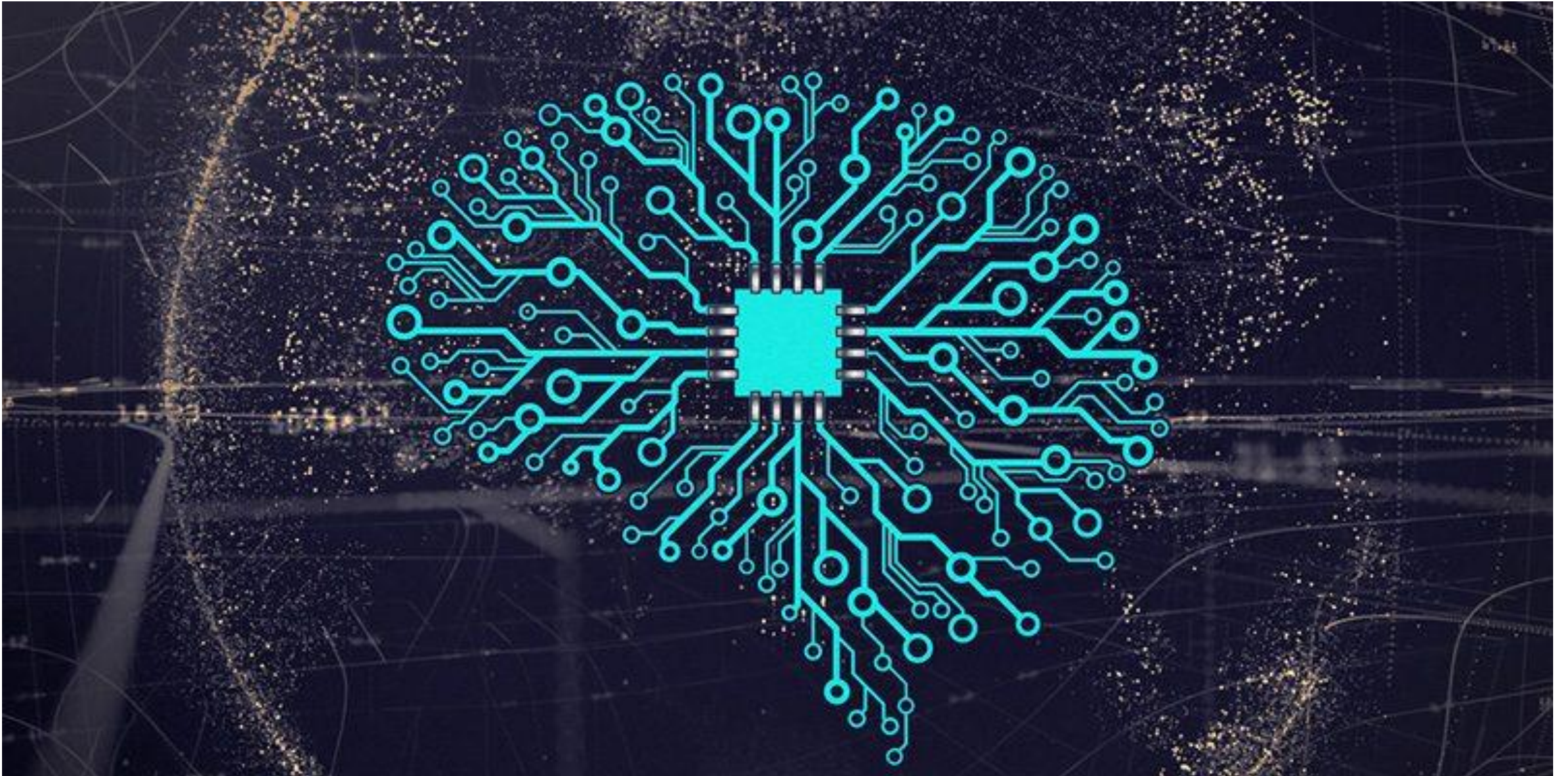
Los datos, transformados en información visual tras ser sometidos a tratamientos estadísticos son atractivos por si mismos.

Herramientas de análisis

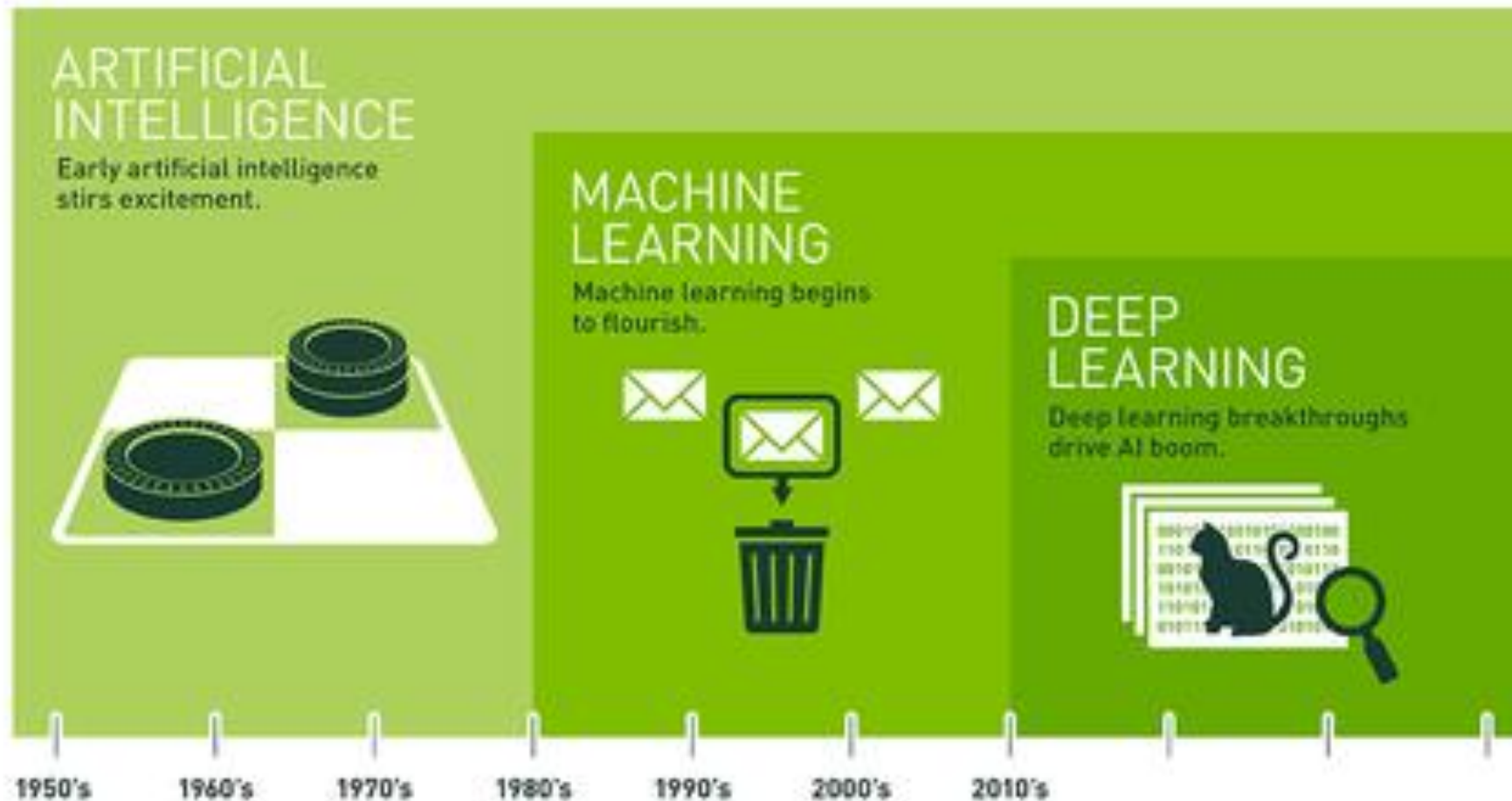
La visualización de información no es un objeto puramente estético sino que puede funcionar como herramienta de análisis para los usuarios.

Nuevo paradigma

Las herramientas interactivas permiten al usuario leer e interpretar el contenido de una infografía como desee, modificándolo o según su interés o necesidad.



Evolución de la inteligencia artificial

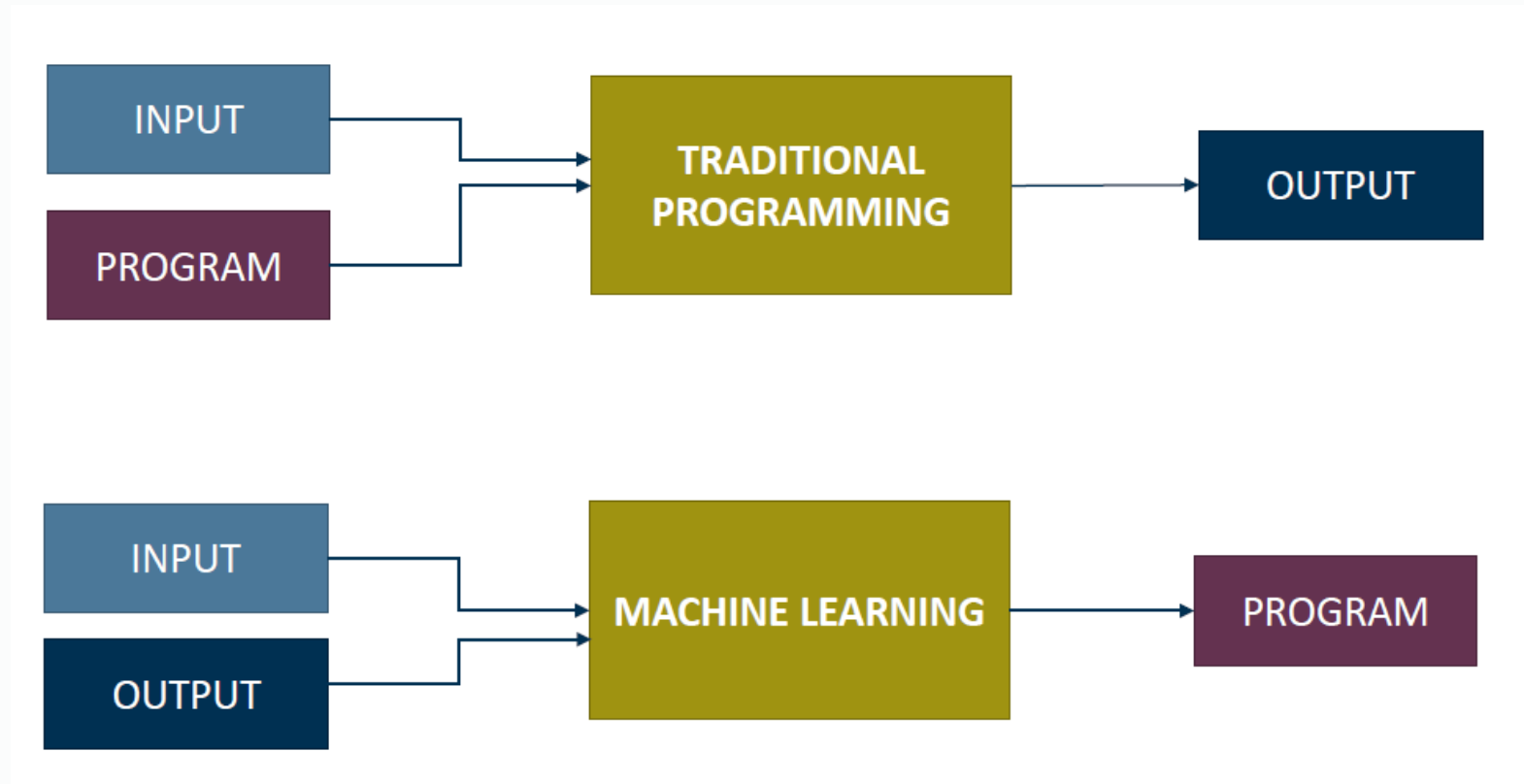


Since an early flush of optimism in the 1950s, smaller subsets of artificial intelligence – first machine learning, then deep learning, a subset of machine learning – have created ever larger disruptions.

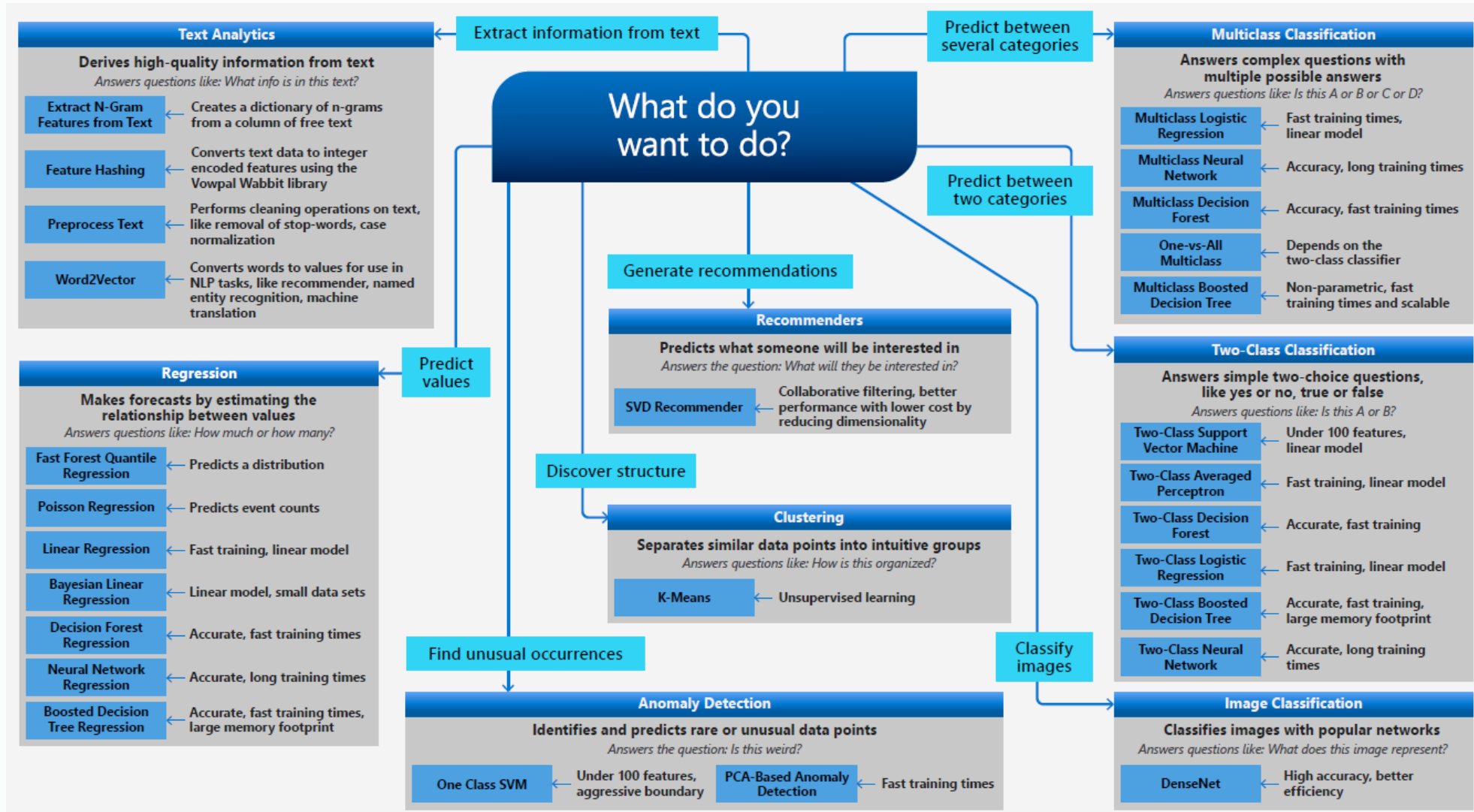
Inteligencia Artificial



¿A qué se denomina machine learning?



Opciones de machine learning



Casos de uso de machine learning

- Un ejemplo de uso del machine learning en el sector de la industria puede ser predecir cuando va a fallar un componente y porqué. Adelantándonos a ese fallo se puede prevenir paradas no planificadas que rompan la producción de la línea.
- Otro ejemplo de uso en industria puede ser identificar de varios productos cuales son los mas rentables o cuales pueden tener mas errores en la fabricación, etc.

Casos de uso de machine learning

- En el caso de recursos humanos puede utilizarse para detectar cvs de personas aptas para un puesto, o perfiles dentro de la empresa mas ideales para un puesto... etc
- También podría aplicarse en el apartado de formación, prediciendo cuales son los empleados que mas necesitan una formación en concreto o los que mas rentabilidad le van a sacar a esta.

Diferencia entre estadística y probabilidad

Un termino importante a tener en cuenta a la hora de comprender el machine learning es la diferencia entre algo que es estadístico y algo probabilístico.

Probabilístico por ejemplo sería el lanzamiento de una moneda al aire, tienes un 50% de posibilidades de cara o cruz.

Estadístico sería que dependiendo de una condiciones de lanzado, el lanzador, el sitio desde donde lanzas o la técnica, las probabilidades de cara o de cruz fueran mayores en una caso que en otro

GRACIAS POR VUESTRA ATENCIÓN

Manuel Luna Molina - Project Manager



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