Walmart Chile

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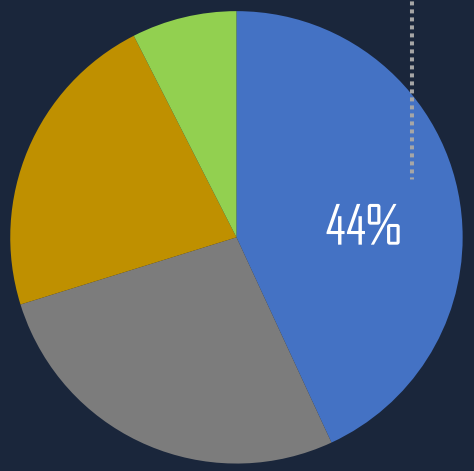
Head of Merchandising Analytics

Walmart Chile



lider

express de LIDER

SuperBodega aCuenta

Central MAYORISTA
Un socio para su negocio

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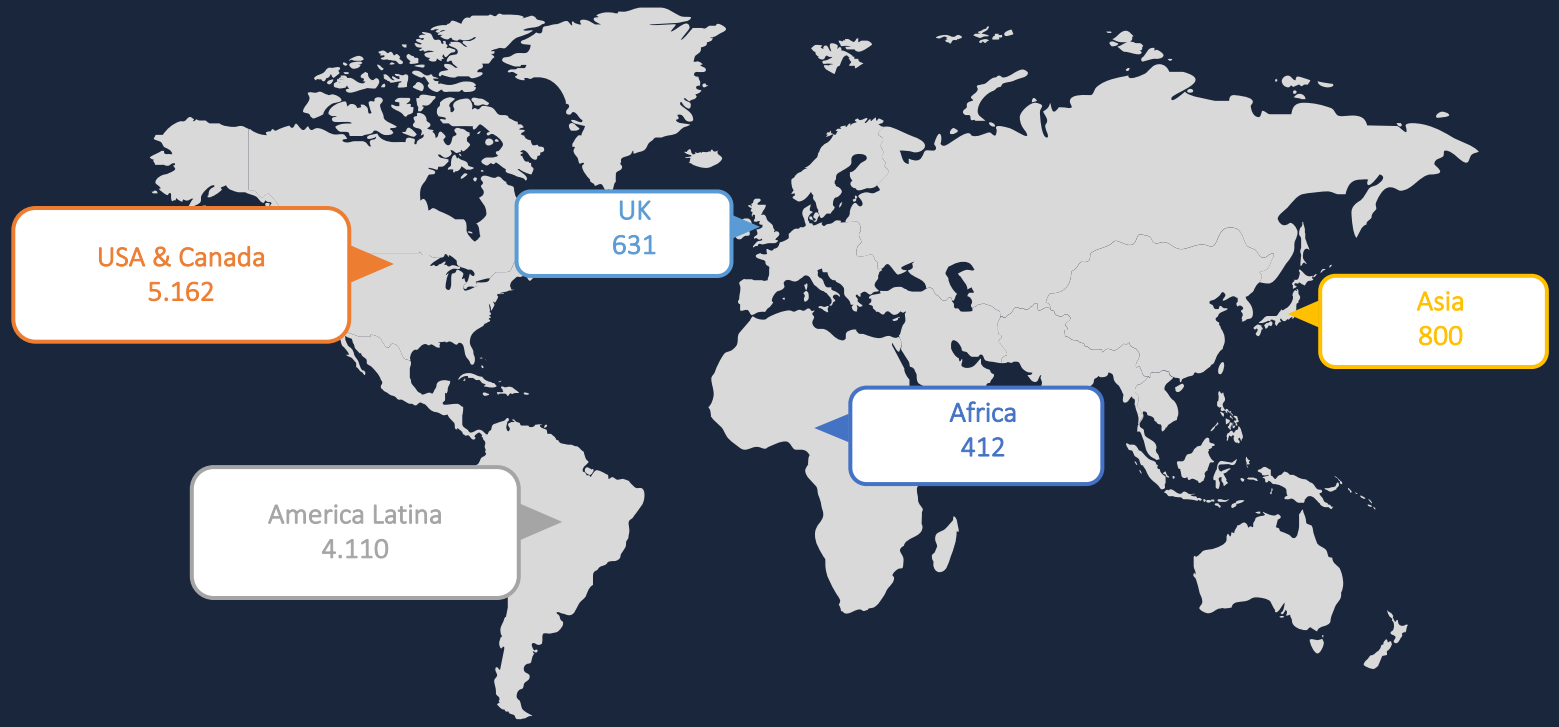
Walmart

Save money. Live better.



11.115 stores
2.3 millions associates
Revenue of US$500 billions

BUY

- Planning
- Negotiation
- Assortment
- Pricing

MOVE

- Imports
- Warehouses
- Routing
- Supply chain

SELL

- Store location
- Workforce scheduling
- Customer Relationship Management (CRM)

390 stores, 60000 products, 50000 associates
>4.5 millions customers
>8000 millions scans

Merchandising Analytics

To provide digital solutions for Walmart Chile business issues,
by using **new technologies**, **mathematical modeling**,
and the ability to process **large amounts of data**.

Pricing	Promotions	Assortment	Layout

Pricing optimization

Best price of each
product and store.

Association rules

Association of products or set of products (reference)

```
7804642160138 PAN ARABE..          $    990
7809611707444 PECHUGA DESH         $  3.690
7802575201218 NIDO FETTUC          $  1.030
7808743602146 AVENA INSTAN         $    770
7805045000144 JABON LAVAR          $  3.490
MARIA TERESA ALARCON ANDANA
RUT MCL: ******7708
7803468003025 MOLDE LIGHT          $  1.390
7802920000916 YOGHURT LIGH         $    220
7802920000916 YOGHURT LIGH         $    220
7802920000916 YOGHURT LIGH         $    220
7802920000916 YOGHURT LIGH         $    220
7613036756440 NUBE PINA            $    380
7613036756440 NUBE PINA            $    380
7613036756440 NUBE PINA            $    380
7613036756440 NUBE PINA            $    380
7802200400047 MERM DURAZNO         $    970
7613036443166 NUBE COCO            $    380
7613036443166 NUBE COCO            $    380
7613036443166 NUBE COCO            $    380
7613036443166 NUBE COCO            $    380
7802710350504 CASSATTA BRI         $  2.190
7802200400061 MERM DAMASCO         $    970
7613035180703 PACK CONDENS         $  1.490
7802615006551 ARROZ GRADO          $  1.150
7802926000682 HELADO AGUA          $  2.690
```

$$supp(X) = \frac{|\{t \in D; X \subseteq t\}|}{|D|} = \frac{C_x}{|D|} = P(X)$$

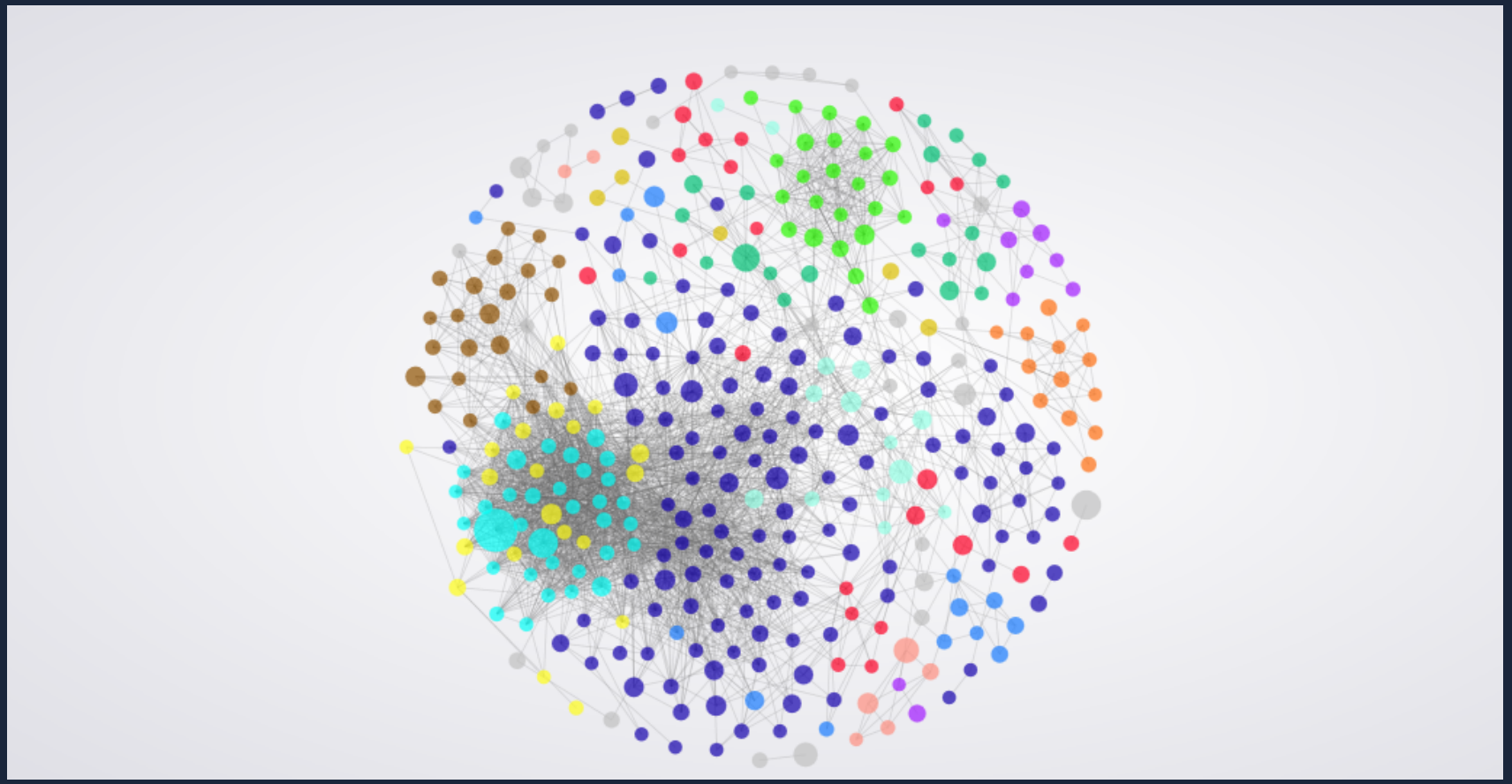
$$conf(X \Rightarrow Y) = \frac{supp(X \cup Y)}{supp(X)} = \frac{P(X \cap Y)}{P(X)} = \frac{C_{xy}}{C_x} = P(Y|X)$$

$$lift(X \Rightarrow Y) = \frac{conf(X \Rightarrow Y)}{supp(X)} = \frac{P(X \cap Y)}{P(X)P(Y)} = \frac{C_{xy}}{C_x C_y}|D|$$

Association rules

STORE_NBR	DPFL_X	Fineline_Desc_X	DPFL_Y	Fineline_Desc_Y	C_xy	C_x	C_y	Lift
3	21100	ACOND FAMILIAR	23600	SHAMPOO FAMILIAR	14991	30140	43910	52.3
3	21075	ACOND TOD/TIPO CAB	23525	SHAMPOO CABELLO SECO	10035	62870	24799	29.7
3	924500	CREMAS	924525	SOPAS	24650	58176	78410	25
3	21075	ACOND TOD/TIPO CAB	23475	SHAMPOO CABELLO NORM	23979	62870	72489	24.3
8	922750	TODA OCASION	928350	TENTACION	17077	38506	54085	23.6
616	924500	CREMAS	924525	SOPAS	21864	42975	58263	23.5
616	21100	ACOND FAMILIAR	23600	SHAMPOO FAMILIAR	29500	52975	64427	23.3
3	921875	DOYPACK KETCHUP	921950	MOSTAZA REGULAR	13060	73408	39251	20.9
616	21075	ACOND TOD/TIPO CAB	23525	SHAMPOO CABELLO SECO	10182	57335	23325	20.5

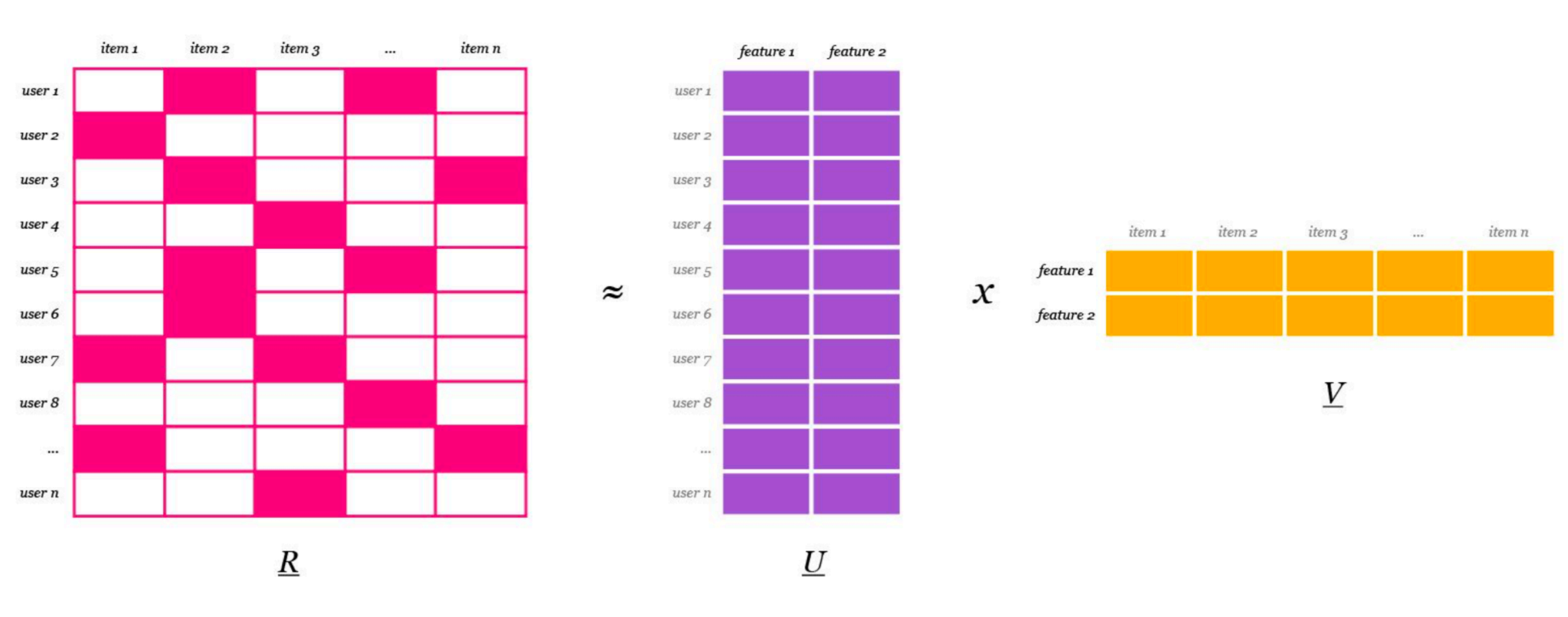
Association rules



Association rules

Forecast modeling

Implicit feedback data



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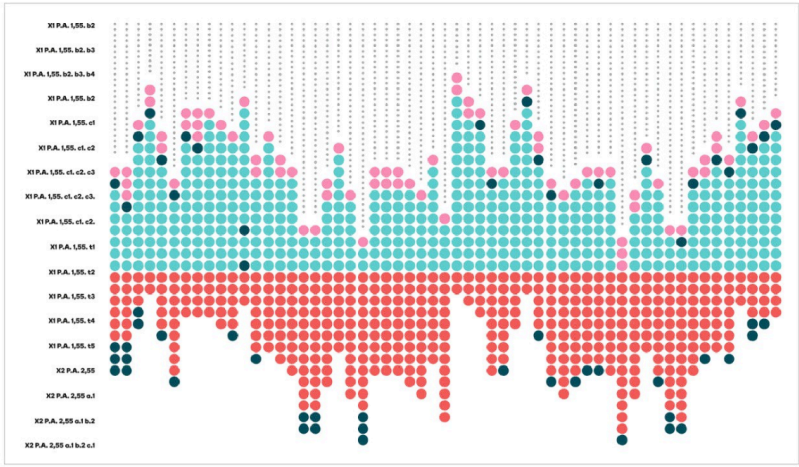
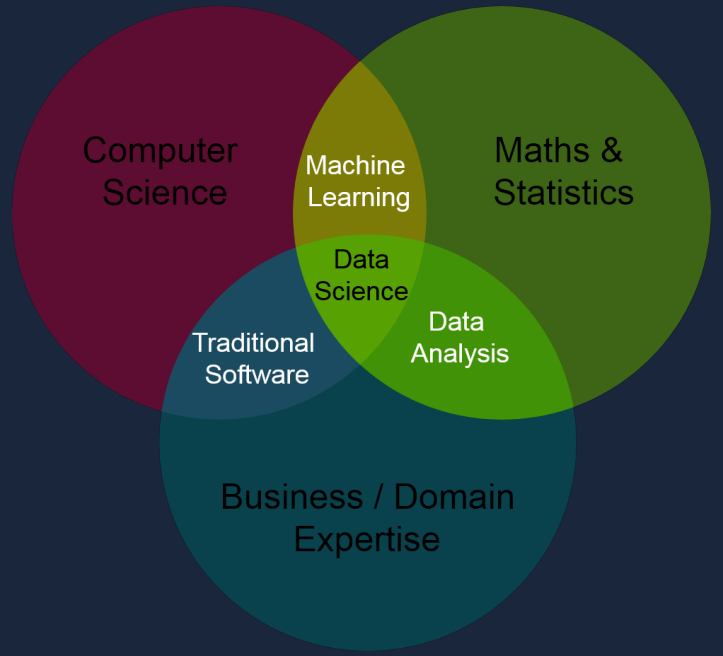


LA NUEVA INFLUENCIA DE LOS MATEMÁTICOS



Empleo!

Data scientist en Chile
90 resultados

Alerta de empleo Desactivado

Data Scientist - Marketing y Clientes - Quilicura
Promocionado
Walmart Chile

Data Scientist Director - Analytics Promocionado
Visa
Santiago, CL

Data Scientist - Advanced Analytics
McKinsey & Company
Santiago, CL
Ph.D in other quantifiable fields (e.g., Statistics, Mathematics, Physics)

Jefe de Mejora Continua - Data Scientist
LATAM Airlines
Provincia de Santiago, Chile
La Gerencia de Mejora Continua LATAM de la Vicep

Data Analyst (Predictive Services Specialist) - Chile
NCR Corporation
Santiago

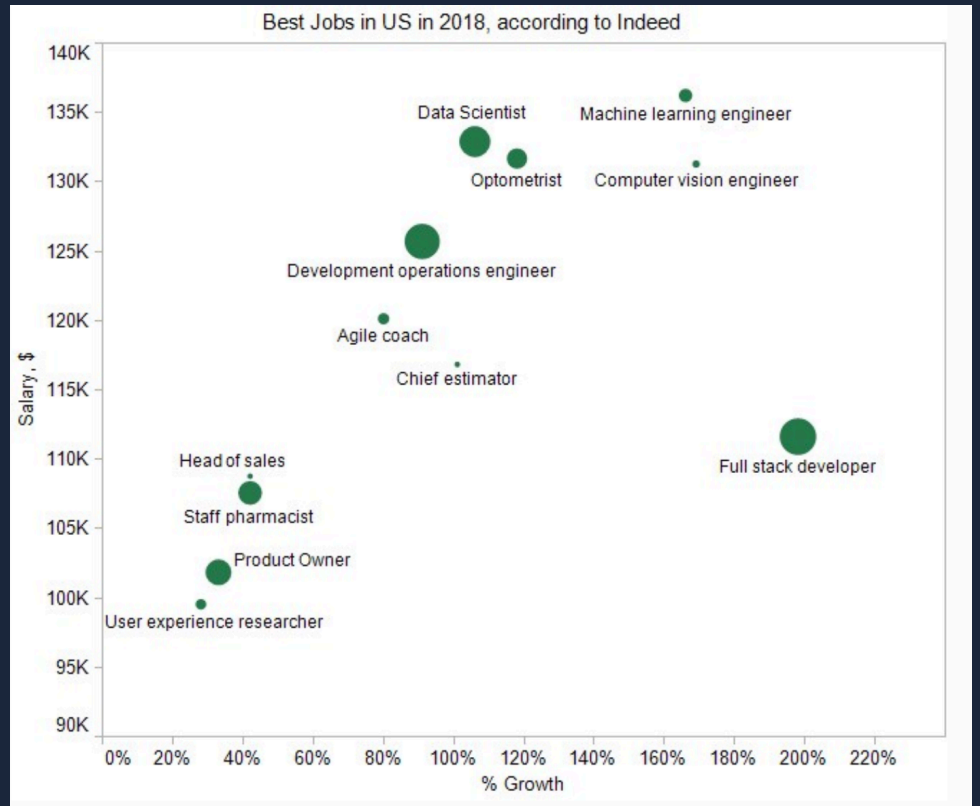


Fig. 1: Top US Jobs in 2018, based on Salary (Y-Axis) and Growth (X-Axis).
Circle size is proportional to the number of job titles.

Recursos:

https://www.kdnuggets.com/

https://datasciencecl.slack.com/

https://www.datasciencecentral.com/

http://blog.kaggle.com/

Walmart Chile
2 años y 4 meses

Head of Merchandising Analytics
ago. de 2019 – actualidad · 3 meses

Product Owner
mar. de 2019 – actualidad · 8 meses

Data Scientist
jul. de 2017 – feb. de 2019 · 1 año y 8 meses
Quilicura, Región Metropolitana de Santiago, Chile

Teamwork

Optimization:

Mathematical modeling and optimization of product assortment.

Price-demand elasticity and price optimization.

Time series:

Hierarchical or grouped forecast of time series.

Data mining:

Asymmetrical association rules.

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