Facturación y trabajo de la minipyme THUNDERCATS S.A.



Integrantes

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1. Paradigmas

Y la importancia de la organización

Se atravesaron tres paradigmas

Con un objetivo común: realizar votación de los mejores modelos

TIERRA-1

Se puso el foco en la creación de variables. Se crearon cientos de ellas y se realizaron diversos experimentos. Sin éxito.

TIERRA-2

Se vuelve a los datasets originales (sin variables creadas por nosotros). Se agregan predicciones de otros modelos como covariables. Se experimenta con los hiperparámetros. Éxito moderado.

TIERRA-3

Se combina lo estudiado en Tierra-1 y Tierra-2. Se corrige comportamiento anómalo en el dataset original. Se agregan predicciones de otros modelos como covariables. Éxito rotundo.

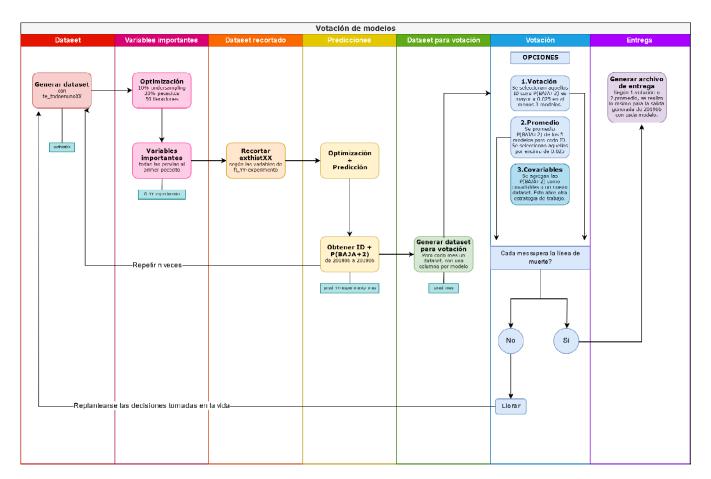


Diagrama de trabajo inicial

1. 1. Tierra-1

O cómo dejar volar la imaginación

Primeras 100 horas

Exploración 28 horas

Reuniones semanales durantes las primeras 5 semanas para discutir el dataset y realizar las tareas. Se crean las cuentas en la nube y se realizan los experimentos sin objetivo fijo.

Variables nuevas 80 horas

Agrupación de conceptos:
Tarjetas
Prestamos y adelantos
Tipo de cliente
Tipo de operaciones
Rentabilidad al banco
Marketing

Algunos ejemplos de variables creadas

Conceptos unificados

```
fecantprest := rowSums( cbind( cprestamos_personales, cprestamos_prendarios, cprestamos_hipotecarios), na.rm=TRUE
fettdeuda := rowSums( cbind( mv_tadelantosefectivo, mprestamos_personales), na.rm=TRUE
fettahorro := rowSums( cbind( mcaja_ahorro_Paquete, mcaja_ahorro_Nopaquete), na.rm=TRUE
fettpatrimonio := rowSums( cbind(fettahorro, fettdeuda), na.rm=TRUE )]
```

Ratios

```
fm_endeudamiento := mprestamos_personales / mv_mlimitecompra ]
fm_pagominimo := mv_mpagominimo / fettdeuda ]
fm_comisionel := mcomisiones / mrentabilidad ]
fettdeuda_rango := fettdeuda/(fettdeuda_max - fettdeuda_min) ]
fettdeuda_rango := fettdeuda/(fettdeuda_max - fettdeuda_min) ]
```

Chiches

```
ECM_renta_avg := (mrentabilidad - mrentabilidad_avg)^2]

ECM_saldo_avg := (mcuentas_saldo - mcuentas_saldo_avg)^2]

ECM_sueldo_avg := (mplan_sueldo - mplan_sueldo_avg)^2]

ECM_ctactepag_avg := (mcuenta_corriente_Paquete - mcuenta_corriente_Paquete_avg)^2]
```

Campeonato mundial de variables

"Que compitan ellas!"

MODELOS 1
Correr docenas de modelos con:
Exthist +
200+ variables nuevas creadas

IMPORTANCIA

Observación de importancia de variables de cada modelo

AGRUPACIÓN
Agrupación de variables que más

Agrupación de variables que más se repetían y que, en promedio, tenian gain superior a un umbral MODELOS 2
Correr el mismo algoritmo, ahora con la selección





1. 2. Tierra-2

O cómo volver a las bases

Se realizan experimentos de forma controlada comparando contra la línea de muerte

RECORTE DEL DATASET

Se conservan sólo las variables que se ubican en importancia por encima del primer paiarito

COVARIABLES

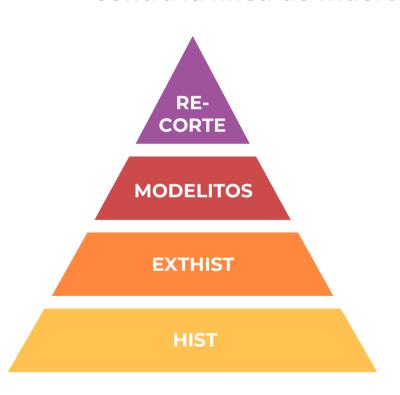
Se agregan como covariables las predicciones de otros modelos

VARIABLES NUEVAS + HISTORICAS

Nuevas variables (unificación de tarjetas) + ventana de regresión de 6 meses

VARIABLES HISTORICAS

Ventana de regresión de 6 meses



Se realizan experimentos de forma controlada comparando contra la línea de muerte

RECORTE DEL DATASET

Se conservan sólo las variables que se ubican en importancia por encima del primer pajarito

COVARIABLES

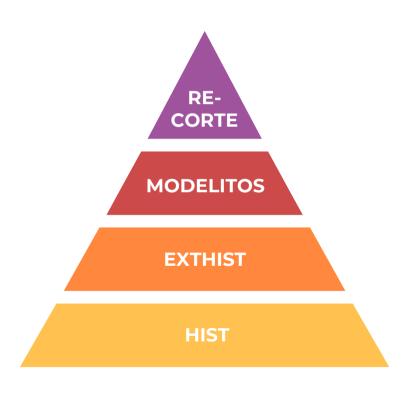
Se agregan como covariables las predicciones de otros modelos

VARIABLES NUEVAS + HISTORICAS

Nuevas variables (unificación de tarjetas) + ventana de regresión de 6 meses

VARIABLES HISTORICAS

Ventana de regresión de 6 meses



Se supera la línea de muerte en **9 de 11 meses**, con diferencias **no mayores a 100k** en Abril 14/40

1. 3. Tierra-3

O cómo poner lo mejor de cada uno

Los 3 pilares de Tierra-3

Aplicando lo aprendido en Tierra-1 y Tierra-2

LIMPIEZA

Se quitan del dataset original las variables con valores constantes durante todo el periodo.
Se introducen NA en aquellas variables con comportamiento atípico (sólo en el mes anómalo).

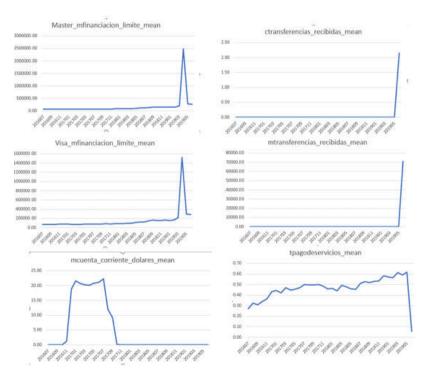
VARIABLES NUEVAS

Se agregan aquellas variables importantes para la clasificación.

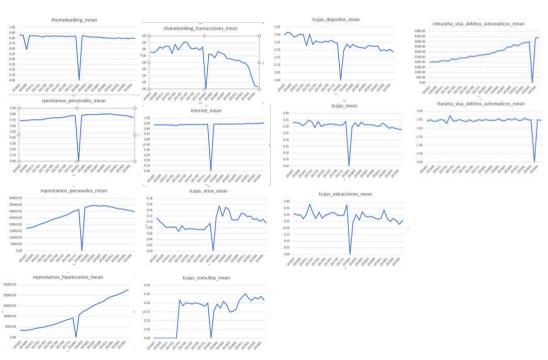
COVARIABLES

Se agregan como covariables las predicciones de otros modelos (no necesariamente consistentemente exitosos).

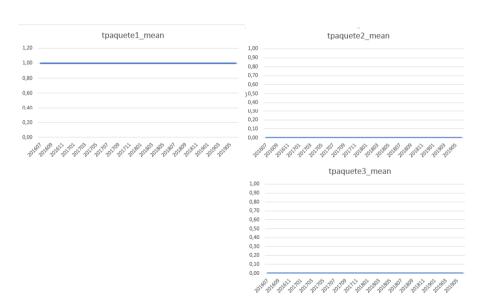
Variables anómalas



Variable-mes con media nula



Variables constantes



Se generan nuevos datasets

seleccionando entre distintas combinaciones

EXTHIST + VARIABLES NUEVAS

- Dataset original
- Variables nuevas
- Variables históricas

EXTHIST LIMPIO + VARIABLES NUEVAS

- Dataset original limpio
- Variables nuevas
- Variables históricas

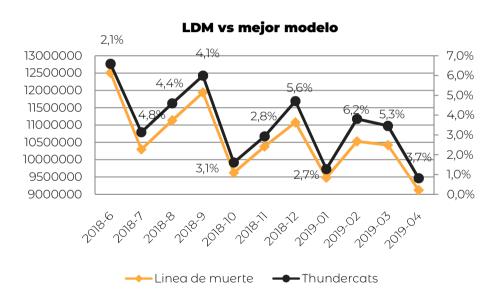
EXTHIST LIMPIO + CATEGORICAS

- Dataset original limpio
- Variables nuevas sólo categóricas
- Variables históricas

Ventana de regresión: 3 , 6 y/ó 12 meses

+ Probabilidades de otros modelos como covariables

Y todo fue bello



Se supera la línea de muerte entre **9 y 11** (de 11 meses) con diferencias **mayores a 200k** en Abril

3. Metodología final

O cómo dejar de sufrir

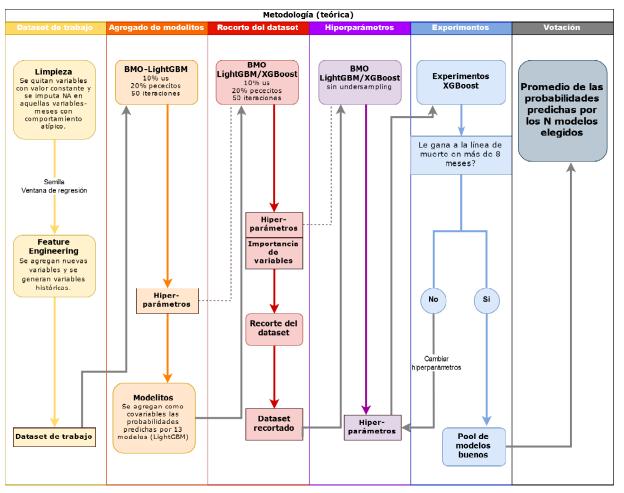


Diagrama de trabajo –teórico- final.

El último fin de semana



4. Modelos ganadores

O cómo votar bien

Primer ensambleFede y Artur

	LINEA DE MUERTE	MODELO 1	MODELO 2	MODELO 3
DATASET	HIST	EXTHIST	EXTHIST LIMPIO (FE)	EXTHIST LIMPIO (FE)
VENTANA	6	3	3	6
VARIABLES	500+	2000+	1000+	900+
OPTIMIZACION		LGBM (SIN US)	LGBM (SIN US)	LGBM (10% US)
RECORTE		111	173	No
COVARIABLES		39 MODELITOS	13 MODELITOS	26 MODELITOS
PREDICCIÓN	XGBOOST	XGBOOST	XGBOOST	XGBOOST
PARÁMETROS	LDM	LDM	OPTIMIZADOS	OPTIMIZADOS

PROBABILIDAD DE CORTE: 0.027

Segundo ensamble Maca

	LINEA DE MUERTE	MODELO 1	MODELO 4	MODELO 3
DATASET	HIST	EXTHIST	EXTHIST (CAT)	EXTHIST LIMPIO (FE)
VENTANA	6	3	6 Y 12	6
VARIABLES	500+	2000+	1000+	900+
OPTIMIZACION		LGBM (SIN US)	No	LGBM (10% US)
RECORTE		111	122	No
COVARIABLES		39 MODELITOS	13 MODELITOS	26 MODELITOS
PREDICCIÓN	XGBOOST	XGBOOST	XGBOOST	XGBOOST
PARÁMETROS	LDM	LDM	LDM	OPTIMIZADOS

PROBABILIDAD DE CORTE: 0.025

5. Evaluación final

O cómo triunfar (?)

400+

experimentos

20/11/2019 16 Black Carpenter

20/11/2019 20 Longhorn crazy

20/11/2019 17 Dracula

20/11/2019 18 Azteca

20/11/2019 19 Goblin

21/11/2019 21 Wood

22/11/2019 22 Mound

lightgbm directo wfv hist.r

lightgbm_directo_wfv_hist.r

xgboost SOFI revisadoGD.R

xgboost_directo_wfv.r

Fecha	T	Experimento	Código original	Código editado	Dataset	Undersampling	Pececitos	Quien	Semi	Algoritr
-	0	Linea de muerte	lineademuerte_UBA.r	-	paquete_premium_hist	No	No	GD	102191	XGBoost
11/11/2019	01	<u>Argentine</u>	lineademuerte_UBA.r	01-Argentine.r	paquete_premium_exthist	No	No	Biam!	102191	XGBoost
12/11/2019	02	Banded Sugar	lightgbm_directo_wfv_hist.r	02-Banded-sugar.r	paquete_premium_exthist	10%	136 - 16%	Biam!	102191	LightGBM
11/11/2019	03	Black Garden	lightgbm_directo_wfv_hist.r	03-Black-garden.r	paquete_premium_exthist	10%	160 - 19%	Artur	102191	LightGBM
12/11/2019	04	<u>Bullet</u>	lightgbm_directo_wfv_hist.r	04-Bullet.r	paquete_premium_exthist01	10%	136 - 16%	Sofi	188317	LightGBM
15/11/2019	05	<u>Carpenter</u>	lightgbm_directo_wfv_hist.r	05-Carpenter.r	paquete_premium_exthist03	10%	217 - 20%	Biam!	102191	LightGBM
16/11/2019	06	Electric	lightgbm_directo_wfv_auto.r	06-Electric.r	paquete_premium_exthist03	10%	217 - 20%	Biam!	102191	LightGBM
16/11/2019	07	False Honeypot	lightgbm_directo_wfv_baja.r	07-False-honeypot.r	paquete_premium_exthist04	10%	100 - %	Artur	102191	LightGBM
16/11/2019	08	Fire	lightgbm_directo_wfv_hist.r	08-Fire.r	paquete_premium_exthist05	10%	136 - %	Sofi	188317	LightGBM
17/11/2019	09	Pavement	lineademuerte_UBA.r		paquete_premium_exthist06	No	No	Fede	102191	XGBoost
17/11/2019	10	Saint Valentine	lightgbm_directo_wfv_hist.r	10-saint-valentine.r	fi_exthist05	No	30 - 20%	Sofi	188317	LightGBM
18/11/2019	11	Pharaoh	lightgbm_directo_wfv_hist.r	11-Pharaoh.r	paquete_premium_exthist08	10%	136 - 6%	Maca	661259	LightGBM
18/11/2019	12	Red Harvester	lightgbm_directo_wfv_hist.r	12-Red-harvester.r	paquete_premium_exthist06	10%	136 - %	Fede	188317	LightGBM
19/11/2019	13	Cocktail	lightgbm_directo_wfv_hist.r	13-Cocktail.r	fi_exthist08	10%	20%	Maca	661259	LightGBM
19/11/2019	14	Acrobat	lightgbm_directo_wfv_hist.r	14-Acrobat.r	fi_exthist10	10%	136 - %	Fede	188317	LightGBM
19/11/2019	15	Yellow Crazy	lightgbm directo wfv hist.r	15-Yellow-crazy.r	paquete premium exthist09	10%	281 - 20%	Sofi	188317	LightGBM

paquete premium exthist11

paquete premium hist

fi exthist11

fi exthist09

10%

10%

10%

10%

281 - 20%

20 - 20%

Biam! 102191 LightGBM

LightGBM

LightGBM

LightGBM

102191 LightGBM

102191 XGBoost

102192 XGBoost

Artur

Artur

Artur

Biam!

Sofi

15-black-carpenter.r

20-longhorn-crazy.r

21-Wood.r

22-Mound.r

Fed	:ha 🔽		Experime	ento	▼	Código	origin	al			Código	editado	•	Datas	et				Jndersa	mpling	Pe	cecito	s 🔻		Semi 🔻 modelo	Algoritm
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201904 201903 201902 201901 201812 201811	201805 201804 201803 201802 201801 201712	201902 201801 201812 201811 201810 201809	9,122,500 10,423,000 10,528,000 9,479,000 11,073,000 10,382,500	201805 201804 201803 201802 201801 201712	201902 201901 201812 201811 201810 201809	9,048,000 10,465,500 10,675,500	201805	201902	8,531,500	201805 201806 201804 201802 201801 201712	201902 201801 201812 201811 201810 201803	8,576,500 8,873,500 10,643,500 8,288,000 10,972,500 10,063,500	201805 201805 201804 201802 201801 201802	201902 201901 201812 201811 201810 201808	8,089,500 8,866,500 9,048,500 8,678,500 9,515,500 8,722,500	201805	201902	8,853,000	201806	201302	4,433,000			8,862,000	201805	201902 9,051,5
201810 201809 201808 201807	201711 201710 201709 201708	201808 201807 201806 201805 201804	9,620,500 11,939,500 11,132,500 10,298,000 12,505,500	201711 201710 201709 201708 201707	201808 201807 201806 201805 201804					201711 201711 201711 201708 201708	201808 201807 201806 201805 201804	9,332,000 11,672,500 10,344,500 10,081,500 12,005,500	201711 201711 201709 201708 201708	201808 201807 201806 201805 201804	8,285,500 10,727,500 8,789,500 9,612,000 11,277,000		ı									
redicciora	in desdr	ain hast	nea de muer	rain desd	rain hast	Parcment	rain desd	rain hasta	int Yalcatiı	rain desd	rain hasti	int Yalentine (L	rain desd	Irain hast	Pharaok	rain desd	Irain kast	Red Harrest	er rain des	drain kast	t Gocktail	rain desc	Irain_bas	t Acrobat	rain desdr	ain hastellow (
201904 201903 201902 201901 201812 201811 201810 201809 201808	201805 201804 201803 201802 201802 201801 201712 201711 201710 201709 201708	201902 201901 201812 201811 201810 201809 201808 201808 201808 201806 201805 201804	3,122,500 10,423,000 10,528,000 3,473,000 11,073,000 10,382,500 3,620,500 11,333,500 11,132,500 10,238,000 12,505,500	201805	201902	8,403,000	201806		9,268,500	201806	201902	9,112,000	201805	201902		201805	201902	9,132,500	201805		8,842,500	201805 201806 201806	201902 201901 201812	8,823,000 10,042,00	201805 0	201902 8,444.
201904 201903 201902 201901 201812 201811 201810 201809 201808	201710 201709 201708	201902 201901 201812 201811 201810 201803 201808 201807 201806 201805 201804	9,122,500 10,423,000 10,528,000 10,528,000 5,473,000 10,000 10,000 10,000 10,000 10,000 11,100 10,200 10,200 10,200 12,505,500	rain_desd 201806 201805 201805	rais_hasti 201902 201901	ack Carpent 8,894,500 10,388,500	rain_desd	rain_hast	Dracela	rain_desd	rain_kast	Acteca	rain_desd	rain_hast	t Goblia	ain_desd 201805 201806 201803 201802 201803 201712	rais_bast 201902 201901 201812 201611 201610 201603	8,867,000 9,482,500 10,626,500 6,744,000 10,631,500 10,308,500	zy rain_dcs 201803 201803		1,977,500 2,019,000	rain_dese 201803 201802	Irais_bas 201902 201901	8,839,000)	ain_hasta
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21/11	/2019					xgboos					21-Woo			– fi extl					10	%				Sofi	102191	XGBoost
22/11	/2019	22	Mound				_		adoGD.	R 2	22-Moi	ınd.r		_ paque	te_pre	emium	hist		10	%				GD	102192	XGBoost
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Fechs	Experimento -	Quić.	Tips	Obs.	Código original		Dataset			See -	Algorita		•			Pa	rámetros XGB		Adala	_
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- 0 L	inea de muerte	GD	LDM	-	lineademuerte_UBA.r		paquete_premium_hist	No		1E+05	XGBoost	0.025	10	0.000	1.000	0.000	1.000	6	0.040 3	00 0.600
22/11/2019 0 T	'arantula	Biam!	LDM	Test	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_hist	No		1E+05	XGBoost	0.025	10	0.000	1.000	0.000	1.000	6	0.040 3	0.600
22/11/2019 01 E	Brown Recluse s.	Biam!	LDM	Dataset	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_exthist	No	-	1E+05	XGBoost	0.025	10	0.000	1.000	0.000	1.000	6	0.040 3	0.600
22/11/2019 02 \$	Starbellied o.	Bism!	LDM	267	linesdemuerte_UBA.r	linesdemuerte_UBA_todos.r	paquete_premium_hist	No	-	1E+05	XGBoost	0.025	10	0.000	1.000	0.000	1.000	6	0.040 2	67 0.600
22/11/2019 03 E	Brazilian whiteknee t.	Biam!	LDM	us 10%	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_hist	10%		1E+05	XGBoost	0.204	10	0.000	1.000	0.000	1.000	6	0.040 3	0.600
22/11/2019 04 /	American grassis.	Sofi	LDM	semilla 🔭	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_hist	No	-		XGBoost	0.025	10	0.000	1.000	0.000	1.000	6	0.040 3	0.600
23/11/2019 05 T	urret s.	Bism!	LDM	us 30%	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_hist	30%		1E+05	XGBoost	0.204	10	0.000	1.000	0.000	1.000	6	0.040 3	0.600
23/11/2019 06 T	exas tan t.	Biam!	XGB-BM0	BMO		xgboost_directo_wfv.r	paquete_premium_hist	0.3	0.2	1E+05	XGBoost	0.079	12	3,993	35.070	8.058	25.234	16	0.053 13	92 0.236
	California orange s.	Biam!	LDM	us 50%	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_hist	50%	•	1E+05	XGBoost	0.049	10	0.000	1.000	0.000	1.000	6	0.040 3	
24/11/2019 08 🛭		Biam!	LDM		lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_hist	No	-	1E+05	XGBoost	0.025	12	3,993	35.070	8.058	25.234	16	0.053 13	
24/11/2019 09 0		Bism!	LDM	Dataset	linesdemuerte_UBA.r	lineademuerte_UBA_todos.r	fi_hist1	No	-	1E+05	XGBoost	0.025	10	0.000	1.000	0.000	1.000	6	0.040 3	
	exas brown t.	Biam!	XGB-BM0	BMO		xgboost_directo_wfv.r	paquete_premium_exthist	0.1	0.2	1E+05	XGBoost	0.204	10	12.001	14.333	5.687	69,367	9	0.179 8	
	Rio Grande gold t.	Biam!	LDM		lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_hist	No	-	1E+05	XGBoost	0.025	10	3,333	35.070	8.058	25.234	16	0.040 3	
24/11/2019 12 C		Biam!	LDM		lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_hist	No	•	1E+05	XGBoost	0.025	10	3,993	35.070	8.058	25.234	16	0.040 2	
24/11/2019 13 A		Bism!	LDM		linesdemuerte_UBA.r	linesdemuerte_UBA_todos.r	paquete_premium_exthist	No	•	1E+05	XGBoost	0.025	10	3,993	35.070		25.234	16	0.040 3	
24/11/2019 14 E		Biam!	LDM		lineademuerte_UBA.r	lineademuerte_UBA_todos.r	fi_exthist01-T2	No 	•	1E+05	XGBoost	0.025	10	12.001	14.339	5.687	69.367	9	0.179 8	
	uropean garden o.	Bism!	LDM		linesdemuerte_UBA.r	linesdemuerte_UBA_todos.r	paquete_premium_exthist	No	•	1E+05	XGBoost	0.025	10	12.001	14,339	5.687	69.367	9	0.179 8	
24/11/2019 16 N		Biam!	LDM		lineademuerte_UBA.r	lineademuerte_UBA_todos.r	fi_exthist01-T2	No	•	1E+05	XGBoost	0.025	10	12.001	14.339	5.687	69.367	9	0.040 3	
	attice o. 'exas recluse s.	Biam! Biam!	LDM XGB-BMO		lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_exthist	No No		1E+05 1E+05	XGBoost XGBoost	0.025	10 10	12.001 23.828	14,339	5.687 3.620	69,367 85,284	9	0.040 3 0.250 1	
	exas recluse s. Sixspotted o.	Biam!	LDM		lineademuerte UBA.r	xgboost_directo_wfv.r lineademuerte_UBA_todos.r	paquete_premium_exthist paquete_premium_exthist	No	0.2	1E+05	XGBoost	0.025	10	23,828	10.787	3,620	03.204 85.284	۰	0.250 1	
25/11/2019 20 8		Biam!	LDM		lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_extrist	No.	-	1E+05	XGBoost	0.025	10	23,828	10.787	3,620	85,284	۰	0.040 3	
	fellow Garden o.	Bism!	LDM		lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_exthist	No.	-	1E+05	XGBoost	0.025	10	23,828	10.787	3,620	85,284		0.040 2	
25/11/2019 22 F		Biam!	LDM	Dataset	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	paquete_premium_exthist [fast]	No.	-	1E+05	XGBoost	0.025	10	0.000	1.000	0.020	1000	6	0.040 2	
25/11/2018 23 E		Biam!	LDM	Dataset	lineademuerte UBA.r	lineademuerte UBA todos.r	paquete premium exthist modelitosxya		_	1E+05	XGBoost	0.025	10	0.000	1.000	0.000	1.000	6	0.040 3	
25/11/2019 24 [Biam!	XGB-BMO		IIII CARCIII CARCINI	xqboost_directo_wfv.r	paquete premium exthist modelitosxva		0.2	1E+05	XGBoost	0.204	15	12.343	40.022		22.165	6	0.148 1	
	Divina bell s.	Bism!	LDM		lineademuerte UBA.r	lineademuerte UBA todos.r	paquete_premium_exthist_modelitosxva			1E+05	XGBoost	0.025	15	12.343	40.022		22.165	ē	0.148 10	
26/11/2019 26 3		Biam!	LDM	Dataset	lineademuerte UBA.r	lineademuerte_UBA_todos.r	fi pomelitos01	No		1E+05	XGBoost	0.025	15	12,343	40.022		22.165	6	0.148 10	
26/11/2019 27 P		Bism!	LDM	Dataset	lineademuerte UBA.r	linesdemuerte UBA todos.r	pomelitos cov1	No.	-	1E+05	XGBoost	0.025	15	12.343	40,022	7,738	22,165	6	0.148 10	0.492
26/11/2019 28 E		Biam!	LDM	Hiperparámetros	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	pomelitos_cov1	No No		1E+05	XGBoost	0.025	10	12.343	40.022	7.738	22.165	6	0.148 10	
26/11/2019 29 P	Pinktoc t.	Maca	LDM	Dataset	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	exthist-flag	No	-	1E+05	XGBoost	0.025	12	26,000	10.000	2.000	73.000	13	0.140 1	31 0.900
24/11/2019 30 B	Bark crabis.	Sofi	LDM	Hiperparámetros **	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	fi_exthist05	No		1E+05	XGBoost	0.025	12	11.000	27.000	3.500	84.000	6	0.098 2	22 0.600
	California trapdoor s.	Sofi	LDM	Hiperparámetros	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	fi_exthist05	No	-	1E+05	XGBoost	0.025	18	3.000	21.000	1.000	77.000	4	0.080 3	85 0.900
32																				
27/11/2019 33 0		Biam!	LDM	Dataset	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	pomelitos_cov2	No	-	1E+05	XGBoost	0.204	10	0.000	1.000	0.000	1.000	6	0.040 3	
27/11/2019 34 N		Biam!	XGB-BM0	BMO		xgboost_directo_wfv.r	pomelitos_cov2	0.1	0.2	1E+05	XGBoost	0.068	3	13.050	15.551	5.463	65.565	ī	0.171 8	
27/11/2019 35 N		Biam!	LDM	Dataset	lineademuerte_UBA.r	lineademuerte_UBA_todos.r	pomelitos_cov2	No	•	1E+05	XGBoost	0.025	9	13.050	15.551	5,463	65,565	7	0.171 8	
	Mexican orangebeauty t.	Bism!	LDM		linesdemuerte_UBA.r	lineademuerte_UBA_todos.r	pomelitos_cov2	No	-	1E+05	XGBoost	0.025	10	13.050	15,551	5,463	65,565	7	0.040 3	
27/11/2019 37 N		Biam!	XGB-BM0	BMO		xgboost_directo_wfv.r	exthist10_cov1	0.1	0.2	1E+05	XGBoost	0.204	18	17.528	19.033	8.436	88.050	14	0.075 2	
27/11/2019 38 N		Bism!	XGB-BM0	BMO		xgboost_directo_wfv.r	exthist13_cov1	0.1	0.2	1E+05	XGBoost	0.204	18	5.165	4.838	10.629	27.353	14	0.127 8	
27/11/2019 39 Y		Biam!	LDM	Dataset	_	lineademuerte_UBA_todos.r	fi_exthist10_cov1	No	-	1E+05	XGBoost	0.025	10	0.000	1.000	0.000	1.000	6	0.040 3	
שומדו שמכולתנב	duri er gesteller gesteller g	Bis = 1	LDM	- Sum-	History Communication (1996) 2.	. Second community IND A Nagabatic .	_61	مااك ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ ـ		15.05	YCR	0.000	- 10	0.000	1.000	0.000	1000		_0.040 _2	nnn_eag
22/11/201	19 22 Mound			xgboost	_SOFI_revisa	doGD.R 22-M	lound.r paqu	iete_prem	nium_	hist		10	0%				GD	1	02192	XGBoost
					_															

24/11/2019

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16 Marbled o

17 Lattice o.

25/11/2019 21 Yellow Garden o.

25/11/2019 22 Florida garden o.

25/11/2018 23 Banded garden o

26/11/2019 26 Sydney funnelwebs

26/11/2019 27 Peruvian pinktoe t.

26/11/2019 28 Equatorian purple t.

24/11/2019 31 California trapdoor s.

27/11/2019 33 Costa Rican red l

27/11/2013 34 Mexican redlea t

27/11/2019 37 Mexican firelegit.

27/11/2019 38 Mexican pink t.

27/11/2018 38 Yucatan rustrump t.

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27/11/2019 35 Mexican flameknee t

27/11/2019 36 Mexican orangebeauty t.

22/11/2019 22 Mound

25/11/2019 24 Dewdrop s.

26/11/2019 25 Diving bell s.

26/11/2019 29 Pinktoc t.

24/11/2019 30 Bark crab s.

18 Texas recluse s

19 Sixspotted o.

20 Silver Garden o

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201807 201806 201805 11,939,500 11,132,500 10,298,000

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201901 201812 201811

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9,479,000

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9,620,500

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10,528,000 9,479,000 11,073,000

10,302,500 11,939,500

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11,073,000 10,382,500

11,300,000 10,293,000 10,293,000 11,886,500 11,340,000

10,626,500 10,961,000 9,524,000 11,353,500 10,129,500 9,432,500 12,168,000 11,442,500 10,928,000

9,423,500 11,552,000

11,552,000 10,526,000 9,382,500 11,239,500 11,239,500 10,736,000

9,343,500 11,500,500 10,459,500

500 353,000 83,000

-9,620,50 -11,939,50 -11,132,50

201805

201711

201709 201708 201707

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427,500 77,000

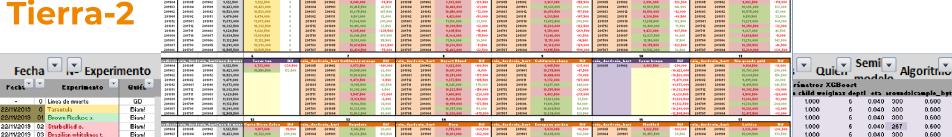
201901

201811 201810 201809

10,677,500 10,944,500 9,518,500

11,536,000

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- 0 Linea de muerte	GD	201809 201808	201710	201807	11,939,500			201710	201807	11,931,500	-0,000	201708	201807	11,020,500	-59,000	201710	201007	11,961,000	21,500				-11,939,500	201710	201807	11,886,500	-53,000 204,000	1.000
22/11/2019 0 Tarantula	Biam!	201007	201708	201005	10,290,000			201708	201005	10,331,000	33,000	201706	201005	10,357,000	59,000	201700	201105	10,414,500	186,500				-10,290,000	201700	201005	10,216,000	-82,000	1.000
22/11/2019 01 Brown Recluse s.	Biam!	201806	201707	201804	12,505,500	12		201707	201804	12,563,500	58,000	201705	201804	12,030,000	-475,500	201707	201804	12,635,000	129,500			16	-12,505,500	201707	201804	12,417,500	-88,000	1.000
22/11/2019 02 Starbellied a.	Bism!	201904	zein-dozd	rain_bart	9.122.500	Carte Rices Zobre	Dif	rein_derd	reis_bert	Angulato	Dif	reis_deré	reis_bert	Bern A 753 000	Dif	rain_der	rein_bert	Europeen gerden	Dif	rais_dord	reis_bert	Herbled	Dif	rain_dord	rein_bert 201902	Lettice 0.026.000	-286,500	1.000
22/11/2019 03 Brazilian whiteknee t.	Biam!	201903	201804	201901	10,423,000	10,722,000	299,000	201804	201901	10,836,500	413,500	201804	201901	10,061,000	-362,000	201804	201901	10,605,000	182,000	201804	201901	10,453,500	30,500	201804	201901	10,601,500	178,500	1.000
22/11/2019 04 American grassis.	Sofi	201902 201901	201803 201802	201012	10,520,000 9,479,000	9,434,000	-45,000	201803 201802	201812 201811	10,026,500 9,568,000	290,500	201803 201802	201012 201011	9,406,000	-73,000	201103	201812	10,523,500 9,148,500	-4,500 -330,500	201803 201802	201012	9,466,500	-12,500	201802	201012	10,727,500 9,388,500	199,500 -90,500	1.000
23/11/2019 05 Turret s.	Biam!	201012	201801	201810 201809	11,073,000	11,379,500	306,500 -73,500	201801	201819	11,395,000	322,000 -54,500	201801	201010 201009	11,100,000	35,000 -264,500	201801	201810	11,241,500	160,500	201801	201810	11,321,500	240,500 -163,000	201801	201810	11,318,000	245,000 -175,000	1.000
23/11/2019 06 Texas tan t.	Biam!	XI 201810	201711	201808	9,620,500 11,939,500	9,486,500	-134,000	201711	201808	9,695,500	75,000	201711	201808	9,279,000	-341,500	201711	201000	11,056,500	1,436,000	201711	201808 201807	9,245,500	-375,000 -155,500	201711	201808	9,283,500	-237,000 -32,000	25.234
23/11/2019 07 California orange s.	Biam!	201808	201709	201806	11,132,500	11,280,500	148,000	201709	201806	11,293,500	161,000	201709	201806	11,219,000	86,500	201709	201106	11,056,500	-76,000	201709	201806	11,104,000	-11,132,500	201709	201806	11,357,000	224,500	1.000
24/11/2019 08 Desert blond t.	Biam!	201807 201806	201708	201805	10,298,000 12,505,500	10,265,000 12,367,000	-33,000 -138,500	201703	201805	12,402,500	-103,000	201708	201805 201804		-10,248,000 -12,505,500	201708	201105 201104	12,215,500	-290,000	201708	201805		-10,298,000 -12,505,500	201708	201305	12,307,000	200,500 -198,500	25.234
24/11/2019 09 California abony s.	Bism!				înas da muar	18 Tayar racinsa				19				20				21				22				23 Banded sarden		1.000
24/11/2019 10 Texas brown t.	Biam!	X 201904	201005	201902	9,122,500	0,716,500	-406,000	201805	201902	0,072,000	-250,500	201005	201902	0,760,500	-362,000	201105	201902	8,736,000	-386,500	201805	201902	8,939,500	-103,000	201005	201902	9,131,500	9,000	69,367

	evaluation of									201902							201105	201902	9,020,000							201902	0,036,000	-286,500	1.000
03	Brazilian whiteknee t.	Biam!	201903	201804	201901	10,423,000	10,722,000	299,000	201804	201901	10,836,500	413,500	201804	201901	10,051,000	-362,000	201804	201901	10,605,000	182,000	201804	201901	10,453,500	30,500	201804	201901	10,601,500	178,500	1.000
04	American grass s.	Sofi	201901	201802	201012	9,479,000	9,434,000	-45,000	201802	201811	9,568,000	89,000	201802	201811	9,405,000	-73,000	201802	201811	9,148,500	-330,500	201802	201811	9,466,500	-12,500	201802	201811	9,388,500	-90,500	1.000
05	Turret s.	Bism!	201012	201801	201810		11,379,500	306,500 -73 500		201810		322,000 -54 500	201801	201810	11,103,000	25,000 -264 500					201801			240,500	201801			245,000	1.000
06	Texas tan t.	Biam!	XI 201810	201711	201808	9,620,500	9,486,500	-134,000	201711	201808	9,695,500	75,000	201711	201808	9,279,000	-341,500	201711	201808	11,056,500	1,436,000	201711	201808	9,245,500	-375,000	201711	201808	9,383,500	-237,000	25.234
07	California orange s.	Biam!	201809	201710	201807	11,132,500	11,280,500	148,000	201709	201806	11,913,000	161,000	201710	201806	11,219,000	*480,000 86,500	201710	201806	11,056,500	-76,000	201710	201807	11,784,000	-155,500 -11,132,500	201710	201806	11,357,000	224,500	1.000
08	Desert blond t.	Biam!	201807	201708	201805	10,298,000	10,265,000 12,367,000	-33,000 -138,500	201708	201805	10,460,000	162,000 -103,000	201708	201805		-10,298,000 -12,505,500	201708	201105	10,361,000	63,000 -290,000	201708	201805		-10,298,000 -12,505,500	201708	201005	10,490,500	200,500 -193,500	25.234
09	California ebony s.	Bism!					10				19				20				21				22				23	=	1.000
10	Texas brown t.	Biam!	X 201904	201805	201902	9,122,500	8,716,500	-406,010	201805	201902	8,872,000	-250,500	201805	201902	8,760,500	-362,000	201105	201902	0,736,000	-316,500	201805	201902	0,939,500	-103,000	201805	201902	9,131,500	9,000	69,367
11						10,423,000																							
	Rio Grande gold t.	Biam!	201903	201804	201901			-10,423,000	201804	201901		-10,423,000	201804	201901		-10,423,000	201304	201901		-10,423,000	201804	201901		-10,423,000	201804	201901	10,876,500	453,500	25,234
	Rio Grande gold t. Costa Rican zebra t.	Biam! Biam!	201903 201902 201901	201804 201803 201802	201901 201012 201811	10,520,000 9,479,000		-10,423,000 -10,520,000 -9,479,000	201804 201003 201802	201901 201012 201811		-10,520,000 -9,479,000	201804 201003 201802	201901 201012 201811		-10,423,000 -10,528,000 -9,479,000	201104 201103 201102	201901 201012 201811		-10,423,000 -10,520,000 -9,479,000	201804 201803 201802	201901 201012 201811		-10,423,000 -10,520,000 -9,479,000	201804 201803 201802	201012 201011	10,040,000 9,402,500	453,500 312,000 -76,500	25,234 25,234
12	Costa Rican zebra t.	Biam!		201804 201803 201802 201801 201712	201901 201012 201811 201010 201809	10,520,000		-19,423,000 -19,520,000 -9,479,000 -11,073,000 -10,382,500	201804 201803 201802 201801 201712	201901 201012 201811 201810 201809		-10,520,000	201804 201003 201802 201801 201712	201901 201012 201811 201010 201809		-10,423,000 -10,520,000 -9,479,000 -11,073,000 -10,312,500	201804 201803 201802 201801 201712			-10,423,000 -10,520,000 -9,479,000 -11,073,000 -10,382,500	201804 201803 201802 201801 201712	201901 201012 201811 201810 201809		-10,423,000 -10,520,000 -9,479,000 -11,073,000 -10,312,500	201804 201803 201802 201801 201712	201012	10,040,000 9,402,500 11,549,500	453,500 312,000 -76,500 476,500 -257,500	25.234
12	Costa Rican sebra t. Angulate o.	Bism! Bism!	201901 201812 201811 201810	201804 201803 201802 201801 201712 201711	201901 201012 201811 201010 201809 201808	10,520,000 9,479,000 11,073,000 10,382,500 9,620,500		-90,520,000 -9,479,000 -11,073,000 -90,382,500 -9,620,500	201804 201003 201802 201801 201712 201711	201901 201012 201811 201810 201809 201808		-10,520,000 -9,479,000 -11,073,000 -10,382,500 -9,620,500	201804 201803 201802 201801 201712 201711	201012 201811 201010 201809 201808		-10,423,000 -10,520,000 -9,479,000 -11,073,000 -10,382,500 -9,620,500	201104 201103 201102 201101 201712 201711			-10,423,000 -10,520,000 -9,479,000 -11,073,000 -10,382,500 -9,620,500	201804 201803 201802 201801 201712 201711	201901 201012 201811 201810 201809 201808		-9,620,500	201801	201012 201311 201010 201309 201308	10,040,000 9,402,500 11,549,500 10,125,000 9,218,500	453,500 312,000 -76,500 476,500 -257,500 -402,000	25.234 25.234
12 13 14	Costa Rican zebra t.	Biam!	201901 201012 201811	201304 201802 201802 201801 201712 201711 201710 201709	201901 201012 201311 201010 201309 201308 201307 201306	10,520,000 9,479,000 11,073,000 10,382,500		-10,520,000 -9,479,000 -11,073,000 -10,382,500	201804 201802 201802 201801 201712 201711 201710 201709	201901 201012 201811 201810 201809 201808 201807 201806		-10,520,000 -9,479,000 -11,073,000 -10,382,500	201804 201802 201802 201801 201712 201711 201710 201709	201901 201012 201811 201810 201809 201808 201807 201806		-10,423,000 -10,820,000 -9,479,000 -11,073,000 -10,382,500 -9,620,500 -11,939,500 -11,132,500	201104 201103 201102 201101 201712 201711 201710 201709			-10,423,000 -10,520,000 -9,479,000 -11,073,000 -10,382,500 -9,620,500 -11,939,500 -11,132,500	201804 201803 201802 201801 201712 201711 201710 201709	201901 201012 201011 201010 201009 201000 201007 201006			201001 201712	201012 201311 201010 201309	10,040,000 9,402,500 11,549,500 10,125,000	453,500 312,000 -76,500 476,500 -257,500 -402,000 346,500 290,000	25.234
	04 05 06 07 08 09	03 Brazilian whiteknee t. 04 American grass s. 05 Turset s. 06 Texas tan t. 07 California orange s. 08 California obony s. 10 Texas brown t.	04 American grass s. Sofi 05 Turret e. Bisnal 06 Toxns tan t. Bisnal 07 Californis orange s. Bisnal 08 Oseert blood t. Bisnal 09 Californis obeny s. Bisnal 10 Texas brown t. Bisnal	04 American grass s. Sofi american grass s. S	0.4 American grass s. Sofi Same Sa	O4 American grass 2. Sofi 20094 2009	O4 American grass s. Sofi Service Se	0.4 American graze 5. Sofi	0.4 American grass s. Sofi 2000 2000 2000 30	Out	0.4 American grass s. Sofi 2000 2000 2000 2000 2000 2000 2000 20	0.4 American graza 2. Sofi 20000 20010 2	0.4 American grass s. Sofi 2000 2000 2000 2000 2000 2000 2000 20	0.4 American graza 5. Sofi	0.4 American grass s. Sofi 2000 2000 2000 000 000 000 000 000 000	04 American graza 2. Sofi	0.4 American grass s. Sofi 2000 2010 2010 2010 2010 10.00 2010 201	0.4 American grass s. Sofi 2000 2001 1, 15,25	0.4 American grass s. Sofi	0.4 American grass s. Sofi	0.4 American grass 5. Sofi	04 American graza 2. Sofi 2000 2010 Ame	0.4 American grass 5. Sofi 2000 2000 2000 2000 2000 2000 2000 20	0.4 American grass s. Sofi 2000 2010	0.4 American grass 5. Sofi Sofi	0.4 American grass s. Sofi 2000 2010	0.4 American grass 5. Sofi 2000; 20	0.4 American grass s. Sofi	04 American grass 5. Sofi 29908 29908 1990 29918 1, 18,75% 29918 1, 18,75% 2

203,000

-10,392,5 -9,620,50

-11,939,50

201807 201802 201805 201706 201802 201001 201712 201902 201901 201812 201011 201810 201009 201808

-11,132,5

20190	4 2010	005 20190	2 9,122,500	9,107,000	-15,500	201005	201902	9,142,500	20,000	201005	201902	0,753,000	-369,500	201105	201902	9,030,000	-92,500	201005	201902	9,022,500	-100,000	201005	201902	0,026,000	-286,500
20190	3 2018	804 2019	10,423,000	10,722,000	299,000	201804	201901	10,836,500	413,500	201804	201901	10,061,000	-362,000	201804	201901	10,605,000	182,000	201804	201901	10,453,500	30,500	201304	201901	10,601,500	178,500
20190	2 2010	803 2018	10,528,000	10,694,500	166,500	201803	201012	10,026,500	290,500	201803	201012	10,502,500	54,500	201103	201012	10,523,500	-4,500	201803	201012	10,285,000	-143,000	201003	201012	10,727,500	199,500
2019	1 2018	802 2018	9,479,000	9,434,000	-45,000	201802	201811	9,568,000	89,000	201802	201811	9,406,000	-73,000	201802	201811	9,148,500	-330,500	201802	201811	9,466,500	-12,500	201802	201811	9,388,500	-90,500
20181	2 2010	801 2018	11,073,000	11,379,500	306,500	201801	201810	11,395,000	322,000	201801	201810	11,103,000	35,000	201801	201810	11,241,500	168,500	201801	201810	11,321,500	248,500	201801	201810	11,310,000	245,000
20181				10,309,000	-73,500	201712	201809	10,328,000	-54,500	201712	201809	10,118,000	-264,500	201712	201809	10,100,000	-202,500	201712	201809	10,219,500	-163,000	201712	201809	10,207,500	-175,000
W1 20181	0 2017	711 20180	8 9,620,500	9,486,500	-134,000	201711	201808	9,695,500	75,000	201711	201808	9,279,000	-341,500	201711	201108	11,056,500	1,436,000	201711	201808	9,245,500	-375,000	201711	201808	9,383,500	-237,000
20180				11,936,000	-3,500	201710	201807	11,913,000	-26,500	201710	201807	11,459,500	-480,000	201710	201807	11,645,500	-294,000	201710	201807	11,784,000	-155,500	201710	201807	11,907,500	-32,000
20180				11,280,500	148,000	201709	201806	11,293,500	161,000	201709	201806	11,219,000	86,500	201709	201806	11,056,500	-76,000	201709	201806		-11,132,500	201709	201806	11,357,000	224,500
20180				10,265,000	-33,000	201768	201805	10,460,000	162,000	201708	201805		-10,298,000	201708	201805	10,361,000	63,000	201708	201805		-10,298,000	201708	201805	10,498,500	200,500
20180	6 2017	707 20180	4 12,505,500	12,367,000	-138,500	201707	201804	12,402,500	-103,000	201707	201804		-12,505,500	201707	201894	12,215,500	-290,000	201707	201804		-12,505,500	201707	201804	12,307,000	-193,500
				18				19				20				21				22				23	
redic	in rais_a	dordrain_b	artínos do muos	Texar reclure	Dif	rain_dard	rais_kart	Sizzputted	Dif	rais_dard	reis_kert	Silver Garden	Dif	rain_dard	rain_kart	Tallau Gardan		rais_dard	reis_kert	Fluride Gerdon	Dif	rain_dard	rain_kart	Banded garden	Dif
X 20190	4 2010			8,716,500	-406,000	201805	201902	8,872,000	-250,500	201805	201902	8,760,500	-362,000	201005	201902	8,734,000	-386,500	201805	201902	8,939,500	-183,000	201005	201902	9,131,500	9,000
20190	3 2018	804 2019	10,423,000	l	-10,423,000	201804	201901		-10,423,000	201804	201901		-10,423,000	201804	201901		-10,423,000	201804	201901		-10,423,000	201304	201901	10,876,500	453,500
20190	2 2010	003 2010	10,520,000	l	-10,520,000	201003	201012		-10,520,000	201003	201012		-10,528,000	201103	201012		-10,520,000	201003	201012		-10,528,000	201003	201012	10,840,000	312,000
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19	0	Tarantula	Biam	ı!	201007	201708	201005				201708	201005	10,331,000	33,000	201706	201005	10,357,000	59,000	201700	201105	10,484,500	106,500				-10,290,000	201700	201005	10,216,000	-82,000	1.0
19 (01	Brown Recluse s.	Biam	d.	20180	201707	201804	12,505,500	-		201707	201804	12,563,500	\$8,000	201705	201804	12,030,000	-475,500	201/07	201004	12,635,000	129,500				-12,505,500	201707	201804	12,417,500	-88,000	1.0
19 6	00	Starbellied o.	Bism		redicc	is rais_des	drain_ka	rtínos do muo	Carte Rices Zebi	a Dif	rain_dore	freis_kert	Angulato	Dif	rais_dord	reis_kert	Bern	Dif	rain_dord	frais_kart	European garden	Dif	rais_dare	drain_kart	Herblad	Dif	rain_dar	frais_kart	Lettice	Dif	1.0
10 0	02	starbenied o.	Diam		201904	201005	201902	9,122,500	9,107,000	-15,500	201005	201902	9,142,500	20,000	201005	201902	0,753,000	-369,500	201005	201902	9,030,000	-92,500	201005	201902	9,022,500	-100,000	201005	201902	0,036,000	-286,500	1.00
19 (03	Brazilian whiteknee t.	Biam	ıļ.	201903	201804	201901	10,423,000	10,722,000	299,000	201804	201901	10,836,500	413,500	201804	201901	10,061,000	-362,000		201901	10,605,000	182,000	201804	201901	10,453,500	30,500			10,601,500	178,500	1.0
	~ .				201902	201803	201012	10,520,000	10,694,500	166,500		201012	10,026,500	290,500	201803	201012	10,502,500	54,500	201103	201012	10,523,500	-4,500	201003	201012	10,285,000	-143,000	201803	201012	10,727,500	199,500	
19 L	U4	American grassis.	Sofi		20190	201802	201811	9,479,000	9,434,000	-45,000		201811	9,568,000	89,000	201802	201811	9,406,000	-73,000	201802	201811	9,148,500	-330,500	201802	201811	9,466,500	-12,500	201802		9,388,500	-90,500	1.0
10 /	OF 1	Turret s.	Bism	.1	201817	201801	201810	11,073,000	11,379,500	306,500	201801	201810	11,395,000	322,000	201801	201810	11,103,000	35,000	201801	201810	11,241,500	168,500	201801	201010	11,321,500	248,500	201801	201810	11,318,000	245,000	10
10 1	05	Turret s.	Diam	11	201811	201712	201809	10,382,500	10,309,000	-73,500	201712	201809	10,328,000	-54,500	201712	201809	10,118,000	-264,500	201712	201809	10,120,000	-202,500	201712	201809	10,219,500	-163,000	201712	201809	10,207,500	-175,000	1.00
19 (06	Texas tan t.	Biam	ı! :	XI 201816	201711	201808	9,620,500	9,486,500	-134,000	201711	201808	9,695,500	75,000	201711	201808	9,279,000	-341,500	201711	201108	11,056,500	1,436,000	201711	201808	9,245,500	-375,000	201711	201808	9,383,500	-237,000	25.3
					201801	201710	201807	11,939,500	11,936,000	-3,500	201710	201807	11,913,000	-26,500	201710	201807	11,459,500	-480,000	201710	201807	11,645,500	-294,000	201710	201807	11,784,000	-155,500	201710	201807	11,907,500	-32,000	
13 (U.C.	California orange s.	Biam	Y!	201803	201709	201806	11,132,500	11,280,500	148,000	201709	201886	11,293,500	161,000	201709	201806	11,219,000	86,500	201709	201806	11,056,500	-76,000	201709	201806		-11,132,500	201709	201806	11,357,000	224,500	1.0
400 0	00	B	E		201807	201708	201805	10,298,000	10,265,000	-33,000		201805	10,460,000	162,000	201708	201805		-10,298,000	201708	201805	10,361,000	63,000	201708	201805		-10,298,000	201708	201805	10,498,500	200,500	0.00
19 (US	Desert blond t.	Biam	¥!	20180	201707	201804	12,505,500	12,367,000	-138,500	201707	201804	12,402,500	-103,000	201707	201804		-12,505,500	201707	201304	12,215,500	-290,000	201707	201804		-12,505,500	201707	201304	12,307,000	-198,500	25.3
19 (03	California ebony s.	Bism	J.					18				19				20				21				22				23		1.0
					redico	rain de	drain ha	ctinos do muo	Texar reclure	Dif	rain_dere	freis bert	Sizrontted	Dif	rain dord	rein bert	Silver Garden	Dif	rain dord	Irain bart	Tellnu Garden	Dif	rain der	drain bart	Fluride Gerden	Dif	rain dard	rain bart a	Bended gerden	Dif	
19 1	10	Texas brown t.	Biam	v!	201904	201805	201902	9,122,500	8,716,500	-406,010	201805	201902	8,872,000	-250,500	201805	201902	8,769,500	-362,000	201805	201902	0,736,000	-386,500	201805	201902	0,939,500	-183,000			9,131,500	9,000	63.3
19 1	11	Rio Grande gold t.	Biam	,l	201903	201804	201901	10,423,000	l .	-10,423,000	201804	201901		-10,423,000	201804	201901		-10,423,000	201804	201901		-10,423,00	201804	201901		-10,423,000	201304		10,876,500	453,500	25.3
					201902	201003	201012	10,520,000	l	-10,520,000	201003	201012		-10,520,000	201003	201012		-10,528,000	201103	201012		-10,520,00	201003	201012		-10,528,000	201003	201012	10,840,000	312,000	
		Contract Miles and Contract	B:		20190		201811	9,479,000			201802			-9,479,000	201802	201811		-9,479,000	201802	201811			201802	201811		-9,479,000	201802	201811	9,402,500		

muerte	GD	201808	201709	201806	11,132,500			201709	201806	11,166,500	34,000	201707	201306	10,959,000	-173,500	201709	201206	11,186,500	54,000				-11,132,500	201709	201806	11,336,500	204,000	1.00
la	Biam!	201007	201708	201005	10,290,000			201708	201005	10,331,000	33,000	201706	201005	10,357,000	59,000	201700	201105	10,414,500	106,500				-10,290,000	201708	201105	10,216,000	-82,000	1.00
Recluse s.	Biam!	201806	201707	201804	12,505,500	12		201707	201804	12,563,500	53,000	201705	201804	12,030,000	-475,500	201707	201004	12,635,000	129,500			16	-12,505,500	201707	201804	12,417,500	-88,000	1.00
ied o.	Bism!	201904	201005	201902	9,122,500	Curte Rices Zebr 9,107,000	- Dif	201005	rein_bert 201902	Angulate 9,542,500	Dif 20,000	201005	drein_bart 201902	Bern 0,753,000	Dif -369,500	201105	drain_bart	9,020,000	Dif -92,500	201005	201902	Herblad 9,022,500	-100,000	201105	201902	Lettice 0,036,000	Dif -216,500	1.00
n whiteknee t.	Biam!	201903	201804	201902	10,423,000	10,722,000	299,000	201804	201901	10,836,500	413,500	201804	201901	10,061,000	-362,000	201804	201901	10,605,000	182,000	201804	201901	10,453,500	30,500	201804	201901	10,601,500	178,500	1.00
n grassis.	Sofi	201902	201803	201012	9,479,000	9,434,000	166,500 -45,000	201803	201812	10,026,500 9,563,000	290,500 89,000	201803	201012	10,502,500	54,500 -73,000	201103	201012	10,523,500 9,148,500	-4,500 -330,500	201803	201012	10,315,000	-143,000 -12,500	201803	201012	10,727,500 9,388,500	199,500	1.00
g. 455 5.	Biam!	201012	201801	201810	11,073,000	11,379,500	306,500	201801	201899 201899	11,395,000	322,000	201801	201810	11,103,000	35,000	201801	201010	11,241,500	160,500	201801	201810	11,321,500	248,500	201801	201810	11,318,000	245,000	1.00
an t.	Biam!	201811 Yr 201810	201712	201809 201808	10,382,500 9,620,500	9,486,500	-73,500 -134,000	201712	201808	10,328,000 9,695,500	75,000	201711	201809 201808	10,118,000	-264,500 -341,500	201711	201109	10,120,000	1,436,000	201711	201808	10,219,500 9,245,500	-163,000 -375,000	201711	201808	10,207,500 9,383,500	-237,000	25.2
nia oranges.	Biam!	201809	201710	201807	11,939,500	11,936,000	-3,500 540,000	201710	201807	11,913,000	-26,500 161,000	201710	201807	11,459,500	-480,000 86,500	201710	201107	11,645,500 11,056,500	-294,000 -76,000	201710	201807	11,784,000	-155,500 -11,132,500	201710	201807	11,907,500 11,357,000	-32,000 224,500	1.00
olond t.	Biam!	201807	201708	201805	10,298,000	10,265,000	-33,000	201768	201805	10,460,000	162,000	201708	201805	11,617,000	-10,298,000	201708	201105	10,361,000	63,000	201708	201805		-10,298,000	201708	201005	10,498,500	200,500	25.2
		201806	201707	201804	12,505,500	12,367,000	-138,500	201707	201804	12,402,500	-103,000	201707	201804	24	-12,505,500	201707	201104	12,215,500	-290,000	201707	201804	22	-12,505,500	201707	201804	12,307,000	-198,500	
ia ebony s.	Bism!	radiccia	rais_dozá	rais_kart	ínos do muor	Texar reclure	Dif	rain_dard	Ireis_kert	Sizzputted	Dif	rais_der	drain_bart	Silver Garden	Dif	rain_dar-	drain_bart	Tollau Gardon	Dif	rain_daze	frais_kart	Fluride Gerdon	Dif	ain_dard	rais_kart	Banded garden	Dif	1.00
rown t.	Biam!	X 201904	201805	201902	9,122,500	8,716,500	-406,000	201805	201902	8,872,000	-250,500	201805	201902	8,760,500	-362,000	201005	201102	8,734,000	-386,500	201805	201902	8,939,500	-183,000	201005	201902	9,131,500	9,000	69.3
and a market to	Di	201903	201804	201901	10,423,000		-10,423,000	201804	201901		-10,423,000	201804	201901		-10,423,000	201804	201901		-10,423,000	201804	201901		-10,423,000	201804	201901	10,876,500	453,500	26.2

	201902	201803	201812	10,528,000			201803	201812	10,564,500	36,500	201801	201812	10,351,000	-177,000	201103	201812	10,449,000	-79,000				-10,528,000	201803	201812	10,684,500	156,500	
	201901	201802	201811	9,479,000			201802	201811	9,470,500	-8,500	201712	201811	9,373,500	-105,500	201802	201811	9,372,000	-107,000				-9,479,000	201802	201811	9,499,000	20,000	
Out of	201812	201801	201810	11,073,000			201801	201810	11,185,500	112,500	201711	201810	11,248,000	175,000	201801	201810	11,217,000	144,000				-11,073,000	201801	201810	11,419,500	346,500	173
QuićL	201811	201712	201809	10,382,500			201712	201809	10,392,000	9,500	201710	201809	10,223,500	-159,000	201712	201809	10,350,500	-32,000				-10,382,500	201712	201809	10,302,500	-80,000	
	201810	201711	201808	9,620,500			201711	201808	9,547,500	-73,000	201709	201808	9,400,500	-220,000	201711	201808	9,403,500	-217,000				-9,620,500	201711	201808	9,500,500	-120,000	
GD	201809	201710	201807	11,939,500			201710	201807	11,931,500	-8,000	201708	201807	11,880,500	-59,000	201710	201807	11,961,000	21,500				-11,939,500	201710	201807	11,006,500	-53,000	
GD	201808	201709	201806	11,132,500			201709	201806	11,166,500	34,000	201707	201806	10,959,000	-173,500	201709	201806	11,186,500	54,000				-11,132,500	201709	201806	11,336,500	204,000	
Biam!	201007	201708	201005	10,290,000			201708	201005	10,331,000	33,000	201706	201005	10,357,000	59,000	201700	201005	10,484,500	106,500				-10,298,000	201700	201805	10,216,000	-82,000	
	201806	201707	201804	12,505,500			201707	201804	12,563,500	50,000	201705	201804	12,030,000	-475,500	201707	201804	12,635,000	129,500				-12,505,500	201707	201804	12,417,500	-88,000	
Biam!					12				13				14				15				16				17		1
□ 11	rediccia	rain_dord	rais_bartí	nos de muer	Carte Rices Zobre	Dif	rein_dard	rein_bert	Anguleto	Dif	rain_dazd	lrais_bart	Bern	Dif	rain_dard	frais_bart	European garden	Dif	rain_dard	rais_bart	Herblad	Dif	rain_dard	rain_bart	Lettice	Dif	
Bism!	201904	201005	201902	9,122,500	9,107,000	-15,500	201005	201902	9,142,500	20,000	201005	201902	0,753,000	-369,500	201105	201102	9,030,000	-92,500	201005	201902	9,022,500	-100,000	201005	201902	0,036,000	-286,500	
										20,000 413,500																	
Biam!	201904	201005	201902	9,122,500 10,423,000 10,520,000	9,107,000	-15,500	201005	201902	9,142,500		201005	201902 201901 201012	0,753,000	-369,500 -362,000 54,500	201105	201902	9,020,000	-92,500 182,000 -4,500	201005	201902	9,022,500	-100,000 30,500 -143,000	201005	201902	0,036,000	-286,500	
	201904 201903 201902 201901	201805 201804 201803 201802	201902 201901 201812 201811	9,122,500 10,423,000 10,520,000 9,479,000	9,107,000 10,722,000 10,694,500 9,434,000	-15,500 299,000 166,500 -45,000	201005 201804 201803 201802	201902 201901 201012 201011	9,142,500 10,336,500 10,026,500 9,563,000	413,500	201005 201804 201803 201802	201902 201901 201012 201811	0,753,000 10,061,000 10,502,500 9,406,000	-369,500 -362,000 54,500 -73,000	201105 201104 201103 201102	201902 201901 201812 201811	9,030,000 10,605,000 10,523,500 9,148,500	-92,500 182,000 -4,500 -330,500	201805 201804 201803 201802	201902 201901 201012 201811	9,022,500 10,453,500 10,385,000 9,466,500	-100,000 30,500 -143,000 -12,500	201805 201804 201803 201802	201902 201901 201012 201811	0,036,000 10,601,500 10,727,500 9,388,500	-286,500 178,500 199,500 -90,500	
Biam! Sofi	201904 201903 201902	201805 201804 201803	201902 201901 201012	9,122,500 10,423,000 10,520,000	9,107,000 10,722,000 10,694,500	-15,500 299,000 166,500 -45,000 306,500	201005 201804 201803 201802 201801	201902 201901 201012	9,142,500 10,836,500 10,826,500 9,568,000 11,395,000	413,500	201805 201804 201803	201902 201901 201012	0,753,000 10,061,000 10,502,500	-369,500 -362,000 54,500	201105 201104 201103	201902 201901 201812	9,030,000 10,605,000 10,523,500	-92,500 182,000 -4,500 -330,500 160,500	201805 201804 201803	201902 201901 201012	9,022,500 10,453,500 10,285,000	-100,000 30,500 -143,000 -12,500 240,500	201005 201004 201003	201902 201901 201012	0,036,000 10,601,500 10,727,500 9,388,500 11,218,000	-214,500 173,500 199,500 -90,500 245,000	
Biam!	201904 201903 201902 201901	201805 201804 201803 201802	201902 201901 201812 201811	9,122,500 10,423,000 10,520,000 9,479,000	9,107,000 10,722,000 10,694,500 9,434,000	-15,500 299,000 166,500 -45,000	201005 201804 201803 201802	201902 201901 201012 201011	9,142,500 10,336,500 10,026,500 9,563,000	413,500	201005 201804 201803 201802	201902 201901 201012 201811	0,753,000 10,061,000 10,502,500 9,406,000	-369,500 -362,000 54,500 -73,000	201105 201104 201103 201102	201902 201901 201812 201811	9,030,000 10,605,000 10,523,500 9,148,500	-92,500 182,000 -4,500 -330,500	201805 201804 201803 201802	201902 201901 201012 201811	9,022,500 10,453,500 10,385,000 9,466,500	-100,000 30,500 -143,000 -12,500	201805 201804 201803 201802	201902 201901 201012 201811	0,036,000 10,601,500 10,727,500 9,388,500 11,218,000	-286,500 178,500 199,500 -90,500	
Biam! Sofi Biam!	201904 201903 201902 201901 201812	201805 201804 201803 201802 201801	201902 201901 201812 201811 201810	9,122,500 10,423,000 10,520,000 9,479,000 11,073,000	9,107,000 10,722,000 10,694,500 9,434,000 11,379,500	-15,500 299,000 166,500 -45,000 306,500 -73,500 -134,000	201005 201804 201803 201802 201801	201902 201901 201812 201811 201810	9,142,500 10,836,500 10,826,500 9,568,000 11,395,000	413,500	201805 201804 201803 201802 201801	201902 201901 201912 201811 201810	9,753,000 10,061,000 10,502,500 9,406,000 11,100,000	-369,500 -362,000 54,500 -73,000 35,000	201805 201804 201803 201802 201801	201902 201901 201812 201811 201810	9,030,000 10,605,000 10,523,500 9,140,500 11,241,500	-92,500 182,000 -4,500 -330,500 160,500	201805 201804 201803 201802 201801	201902 201901 201012 201011 201010	9,022,500 10,453,500 10,285,000 9,464,500 11,321,500	-100,000 30,500 -143,000 -12,500 240,500	201805 201804 201803 201802 201801	201902 201901 201012 201011 201010	0,036,000 10,601,500 10,727,500 9,388,500 11,218,000	-214,500 173,500 199,500 -90,500 245,000	
Biam! Sofi Biam! Biam!	201904 201903 201902 201901 201812 201811	201805 201804 201803 201802 201801	201902 201901 201812 201811 201810 201809	9,122,500 10,423,000 10,520,000 9,479,000 11,073,000 10,382,500	9,107,000 10,722,000 10,694,500 9,434,000 11,379,500 10,309,000	-15,500 299,000 166,500 -45,000 306,500 -73,500	201005 201804 201803 201802 201801 201712	201902 201901 201812 201811 201810 201809	9,142,500 10,836,500 10,026,500 9,568,000 11,395,000 10,328,000	413,500	201805 201804 201803 201802 201801 201712	201902 201901 201012 201811 201810 201809	9,753,000 10,061,000 10,582,500 9,486,000 11,188,000 10,118,000	-369,500 -362,000 54,500 -73,000 35,000 -264,500	201105 201104 201103 201102 201101 201712	201902 201901 201012 201011 201010 201009	9,030,000 10,605,000 10,523,500 9,141,500 11,241,500 10,100,000	-92,500 182,000 -4,500 -330,500 160,500 -202,500	201805 201804 201803 201802 201801 201712	201902 201901 201012 201311 201010 201309	9,022,500 10,453,500 10,285,000 9,466,500 11,221,500 10,219,500	-100,000 30,500 -143,000 -12,500 240,500 -163,000	201805 201804 201803 201802 201801 201712	201902 201901 201012 201011 201010 201009	0,036,000 10,601,500 10,727,500 9,388,500 11,318,000 10,207,500	-284,500 173,500 199,500 -90,500 245,000 -175,000	
Biam! Sofi Biam!	201904 201903 201902 201901 201812 201811 XI 201810	201805 201804 201803 201802 201801 201712 201711	201902 201901 201012 201811 201810 201809 201808	9,122,500 10,423,000 10,520,000 9,479,000 11,073,000 10,382,500 9,620,500	9,107,000 10,722,000 10,694,500 9,434,000 11,379,500 10,309,000 9,486,500	-15,500 299,000 166,500 -45,000 306,500 -73,500 -134,000	201005 201804 201803 201802 201801 201712 201711	201902 201901 201912 201911 201910 201909 201909	9,142,500 10,836,500 10,926,500 9,568,000 11,395,000 10,328,000 9,695,500	413,500	201805 201804 201803 201802 201801 201712 201711	201902 201901 201012 201811 201810 201809 201808	0,753,000 10,061,000 10,562,500 9,465,000 11,166,000 10,116,000 9,279,000	-364,500 -362,000 54,500 -73,000 35,000 -264,500 -341,500	201105 201104 201103 201102 201101 201712 201711	201902 201901 201012 201011 201010 201009 201008	9,030,000 10,665,000 10,523,500 9,145,500 11,241,500 10,100,000 11,056,500	-92,500 182,000 -4,500 -330,500 160,500 -202,500 1,436,000	201805 201804 201803 201802 201801 201712 201711	201902 201901 201012 201811 201810 201809 201808	9,022,500 10,453,500 10,245,000 9,466,500 11,221,500 10,219,500 9,245,500	-100,000 30,500 -142,000 -12,500 240,500 -163,000 -375,000	201805 201804 201803 201802 201801 201712 201711	201902 201901 201812 201811 201810 201809 201808	0,024,000 10,601,500 10,727,500 9,388,500 11,218,000 10,207,500 9,283,500	-286,500 178,500 199,500 -90,500 245,000 -175,000 -237,000	

Experimenta

Linea de muerte

02 BMO-LGBM

Cabbage white b

Elephant Hawk m

Small emperor m

Isabella tiger m

Oak processionary m.

American dagger m

Southern flannel m

Black Hairstreak b

Cinnabar m.

Silkworm m.

20 Adonis blue b

02/12/2019 T3-4 04_LGBM_importancia

22 Brimstone b

24 Mourning cloak b

25 Chalk hill blue b

Fech

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01/12/2019 10 Monarch b.

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06 Peacock b.

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27/11/2019 33 Costa Rican red l

27/11/2013 34 Mexican redlea t

27/11/2019 37 Mexican fireleg t

27/11/2019 38 Mexican pink t.

27/11/2018 38 Yucatan rustrump t.

والمدارسية والمحالة المنافية

22/11/2019 | 22 | Mound

27/11/2019 35 Mexican flameknee t

27/11/2019 36 Mexican orangebeauty t.

Obs.

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			201904	201005	201902	9.122.500	I S X GF C G E	DIF	ALL MADE	Talle Barrie	cellirarate areaequ		A III ME TO A	rein_ner	Darare Blass	517	All Miles	Talle No.	Centrarate straty	200	201205 201902	Taxer system	DIF	All With a	rate_sare	9,104,500	2017		41.0
				201809		10,423,000	4,782,000	-339,900	201804	201902	8/413/600	-149,000	201803	201902	9,022,000	-100,500	201109	201902	8,905,500	-217,000	201805 201902	8,903,500	-219,000	201804	201902		-10,000	, a	4 7
Fecha 💛 😽	Experimen	ILO			201901	10,423,000	10,556,500	133,500	201804	201901	10,505,000	82,000	201802	201901	10,418,000	-5,000	201104	201901	10,375,500	-47,500			-10,423,00		201901	10,703,000	280,000	: Qui	AL.
				201803	201012							36,500			10,351,000	-177,000			10,449,000	-79,000			-10,528,00			10,684,500	156,500		_
7 7				201802	201811	9,479,000			201802	201811	9,470,500	-8,500	201712	201811	9,373,500	-105,500	201802	201811	9,372,000	-107,000			-9,479,000	201802		9,499,000	20,000		
Fecha Experim	acato 🗀 🛭 😡			201801	201810	11,073,000			201801	201810	11,185,500	112,500		201810	11,248,000	175,000	201801	201810	11,217,000	144,000			-11,073,00		201810	11,419,500	346,500	rámetros XG	.Bo
1 ccac Capcilla				201712	201809	10,382,500			201712	201809	10,392,000	9,500	201710	201809	10,223,500	-159,000	201712	201109	10,350,500	-32,000			-10,382,50	201712	201809	10,302,500	-80,000		
				201711	201808	9,620,500			201711	201808	9,547,500	-73,000	201709	201808	9,400,500	-220,000	201711	201808	9,403,500	-217,000			-9,620,501	201711	201808	9,500,500	-120,000	n child weigl	1933
- O Linea de muert	e G	·n	201809	201710	201807	11,939,500			201710	201807	11,931,500	-8,000	201708	201807	11,880,500	-59,000	201710	201807	11,961,000	21,500			-11,939,50	201710	201807	11,886,500	-53,000	1.000	
- O Lines de indero		ID.	201808	201709	201806	11,132,500			201709	201806	11,166,500	34,000	201707	201806	10,959,000	-173,500	201709	201806	11,186,500	54,000			-11,132,50	201709	201806	11,336,500	204,000	1.000	
22/11/2019 0 Tarantula	Bi	amil	201007	201708	201005	10,290,000			201708	201005	10,331,000	33,000	201706	201005	10,357,000	59,000	201700	201005	10,484,500	106,500			-10,290,00	201700	201005	10,216,000	-82,000	1.000	
			201806	201707	201804	12,505,500			201707	201804	12,563,500	58,000	201705	201804	12,030,000	-475,500	201707	201804	12,635,000	129,500			-12,505,50	201707	201804	12,417,500	-88,000		
22/11/2019 01 Brown Recluse	es. Bi	am!					12				13				14				15			16				17		1.000	
22/11/2019 02 Starbellied a.	Bir	1	rediccia r	ais_dezdi	rais_karti	nos do muor	Carte Rices Zobre	Dif	rain_dard	reis_kert	Anguleto	Dif	rain_dard	reis_kert	Bern	Dif	rain_dari	Irain_kart	European gerden	Dif	rain_dardrain_bart	Herblad	Dif	rain_dard	rais_kart	Lettice	Dif	1.000	
22/11/2015 02 Starbellied o.	D1	am:	201904	201005	201902	9,122,500	9,107,000	-15,500	201005	201902	9,142,500	20,000	201005	201902	0,753,000	-369,500	201105	201902	9,030,000	-92,500	201805 201902	9,022,500	-100,000	201005	201902	0,036,000	-286,500	1.000	
22/11/2019 03 Brazilian white	knee t. Bi	am!	201903	201804	201901	10,423,000	10,722,000	299,000	201804	201901	10,836,500	413,500	201804	201901	10,061,000	-362,000	201804	201901	10,605,000	182,000	201804 201901	10,453,500	30,500	201804	201901	10,601,500	178,500	1.000	

			201901	201802	201811	9,479,000			201802	201811	9,470,500	-8,500	201712	201811	9,373,500	-105,500	201802	201811	9,372,000	-107,000			-9,479,000	201802	201811	9,499,000	20,000	
Fecha	Experimento	Quić	201812	201801	201810	11,073,000			201801	201810	11,185,500	112,500	201711	201810	11,248,000	175,000	201801	201810	11,217,000	144,000			-11,073,000		201810	11,419,500	346,500	rámetros X
1 55.05	- ribelimento	A dicr	201811	201712	201809	10,382,500			201712	201809	10,392,000	9,500	201710	201809	10,223,500	-159,000	201712	201809	10,350,500	-32,000			-10,382,500	201712	201809	10,302,500	-80,000	
				201711	201808	9,620,500			201711	201808	9,547,500	-73,000	201709	201808	9,400,500	-220,000	201711	201008	9,403,500	-217,000			-9,620,500	201711	201808	9,500,500	-120,000	n child weig
	0 Linea de muerte	GD	201809	201710	201807	11,939,500			201710	201807	11,931,500	-8,000	201708	201807	11,880,500	-59,000	201710	201807	11,961,000	21,500			-11,939,500	201710	201807	11,886,500	-53,000	1.000
-	O Ellies de lilderce	GD	201808	201709	201806	11,132,500			201709	201806	11,166,500	34,000	201707	201806	10,959,000	-173,500	201709	201806	11,186,500	54,000			-11,132,500	201709	201806	11,336,500	204,000	1,000
22/11/2019	O Tarantula	Biam!	201007	201708	201005	10,290,000			201708	201005	10,331,000	33,000	201706	201005	10,357,000	59,000	201700	201805	10,484,500	106,500			-10,298,000	201700	201805	10,216,000	-82,000	1,000
			201806	201707	201804	12,505,500			201707	201804	12,563,500	58,000	201705	201804	12,030,000	-475,500	201707	201804	12,635,000	129,500			-12,505,500	201707	201804	12,417,500	-88,000	
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992422019 (03 Brazilian whiteknee t.	Biam!	201903	201804	201901	10,423,000	10,722,000	299,000	201804	201901	10,836,500	413,500	201804	201901	10,061,000	-362,000	201804	201901	10,605,000	182,000	201804 201901	10,453,500	30,500	201804	201901	10,601,500	178,500	1.000
			201902	201003	201012	10,520,000	10,694,500	166,500	201993	201012	10,026,500	290,500	201003	201012	10,502,500	54,500	201103	201012	10,523,500	-4,500	201003 201012	10,245,000	-142,000	201003	201012	10,727,500	199,500	
22/11/2019 (04 American grassis.	Sofi	201901	201802	201811	9,479,000	9,434,000	-45,000	201802	201811	9,568,000	89,000	201802	201811	9,406,000	-73,000	201802	201811	9,148,500	-330,500	201802 201811	9,466,500	-12,500	201802	201811	9,388,500	-90,500	1.000

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201904	201805	201902	9,122,500	8,783,860	-339,500	201005	201902	8,973,999	-149,000	201003	201902	9,022,000	-100,500	201105 20	20910	0,905,500	-217,000	201005	201902	8,903,500	-219,000	201205	201902	9,104,500	-10,000
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201902	201803	201012	10,528,000			201803	201812	10,564,500	26,500	201801	201012	10,351,000	-177,000	201803 2	01812	10,449,000	-79,000				-10,528,000	201803	201012	10,684,500	156,500
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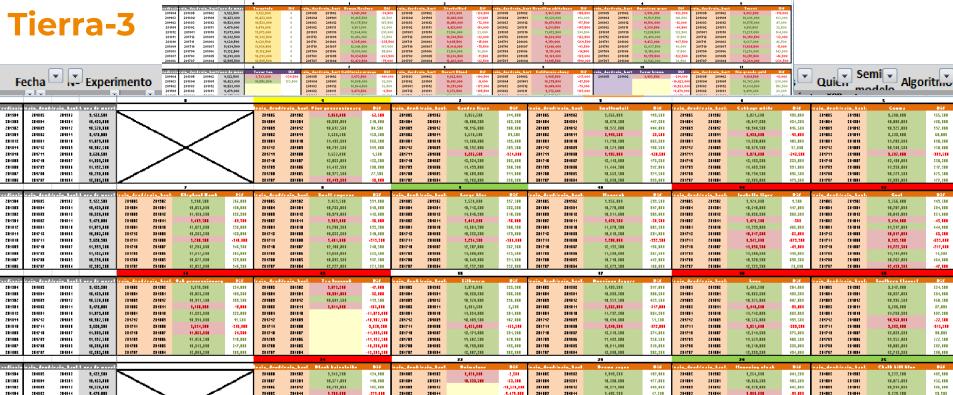
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1	201903	201804	201901	10,423,000	10,556,500	133,500	201804	201901	10,505,010	82,000	201802	201901	10,418,000	-5,000	201804	201901	10,375,500	-47,500			-10,423,000	201804	201901	10,703,000	280,000
	201902	201803	201012	10,528,000	l .		201803	201812	10,564,500	36,500	201801	201012	10,351,000	-177,000	201103	201812	10,449,000	-79,000			-10,528,000	201803	201812	10,684,500	156,500
	201901	201802	201811	9,479,000	l .		201802	201811	9,470,500	-8,500	201712	201811	9,373,500	-105,500	201802	201811	9,372,000	-107,000			-9,479,000	201802	201811	9,499,000	20,000
•	201812	201801	201810	11,073,000	l .		201801	201810	11,185,500	112,500	201711	201810	11,248,000	175,000	201801	201810	11,217,000	144,000			-11,073,000	201801	201810	11,419,500	346,500
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	201810	201711	201808	9,620,500	l .		201711	201808	9,547,500	-73,000	201709	201808	9,400,500	-220,000	201711	201108	9,403,500	-217,000			-9,620,500	201711	201808	9,500,500	-120,000
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	201806	201707	201804	12,505,500			201707	201804	12,563,500	50,000	201705	201804	12,030,000	-475,500	201707	201804	12,635,000	129,500			-12,505,500	201707	201804	12,417,500	-88,000
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	201904	201005	201902	9,122,500	9,107,000	-15,500	201005	201902	9,142,500	20,000	201005	201902	0,753,000	-369,500	201005	201902	9,020,000	-92,500	201005 201902	9,022,500	-100,000	201005	201902	0,036,000	-286,500
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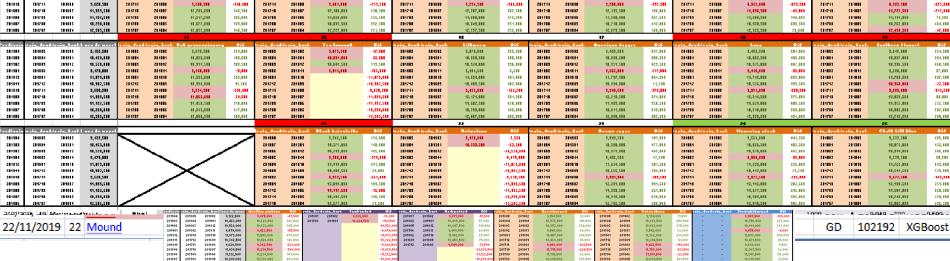
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5Personas **colaborando**

9Cuentas de Google Cloud

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Horas hombre

2760 USDGastados en procesamiento

2 de 3 ensambles

en el podic

"Retreat...? ThunderCats never retreat!"

-Lion-O

Gracias!



Créditos

Contención emocional

Feature Engineering	Fede Artur Maca	Mayordomo	El Kevin
Organización General	Sofi Biam!	Catering	El Viejo Palermo Dia%
Scripts	Maca Sofi Biam!	Mascotas	Cucho Mina Gatita

Thundercats