

D. Juan V. Juan

Ajuste de parámetros y exportación de modelos

Equipo Innovación Copec



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EY

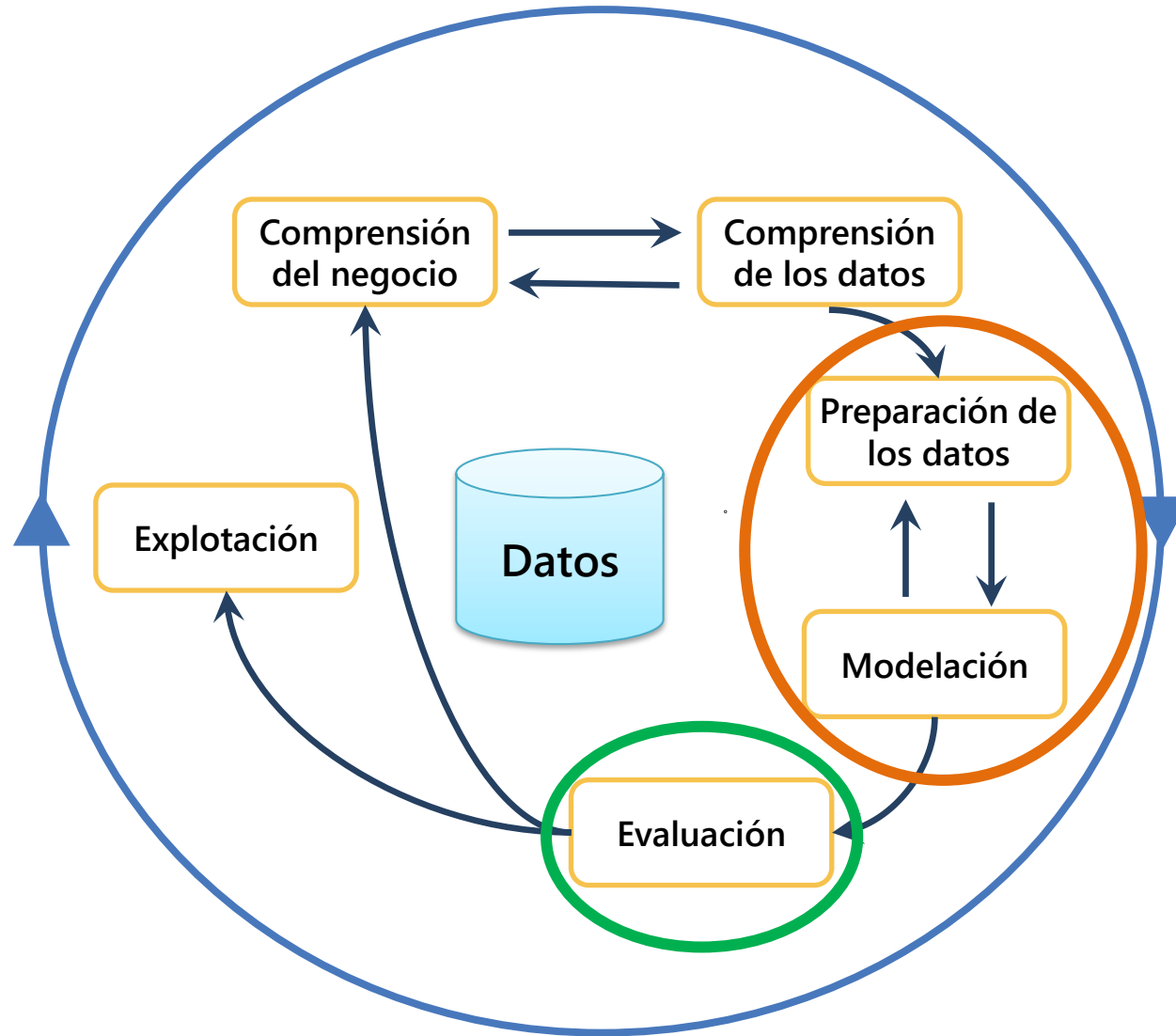


■ The better the question. ■ The better the answer. ■ The better the world works.



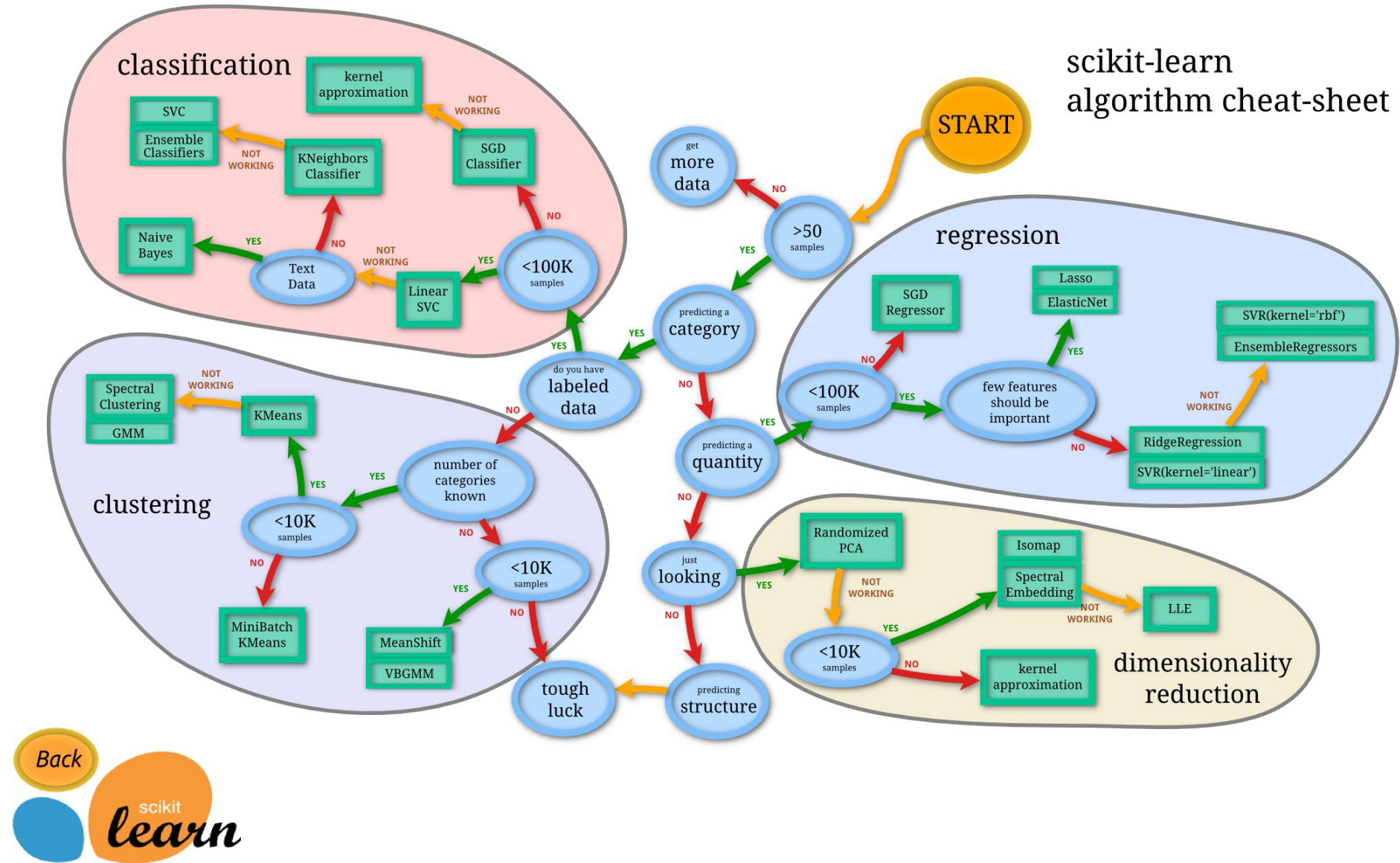
Building a better
working world

Visión General



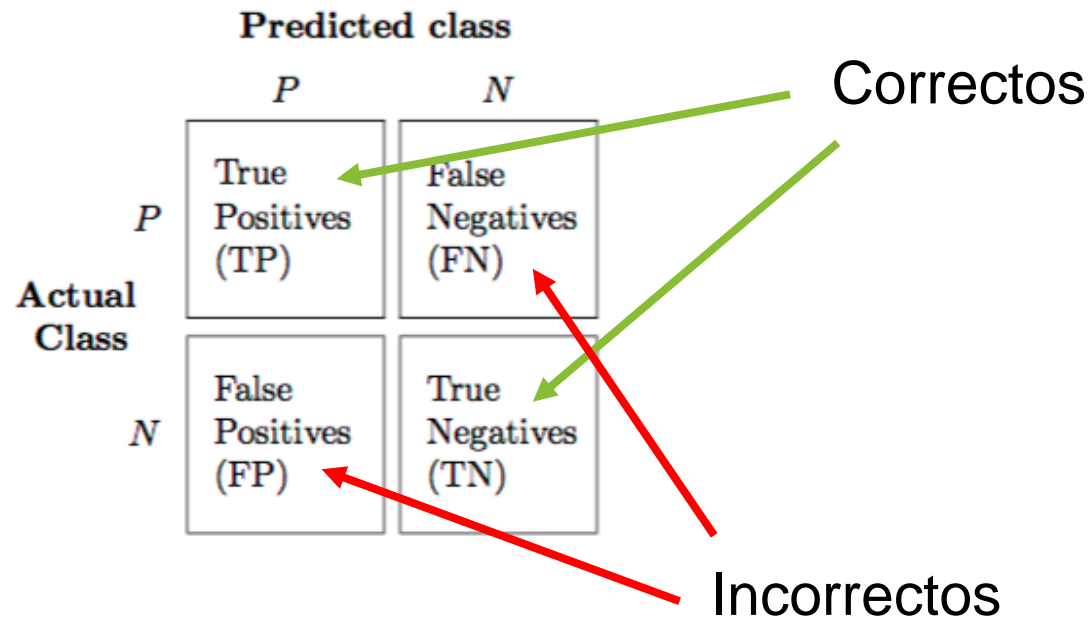
A futuristic digital brain composed of glowing circuit lines and binary code, connected to various data visualization elements like a molecular structure, a status gauge showing 78%, and a bar chart, all set against a dark blue background with a glowing circular base.

Scikit-learn methods



Métricas de evaluación – Supervised learning

- Accuracy
- Weighted accuracy (incluir consideraciones monetarias)
- Precision, Recall, F1 ratio
- ROC (Receiver Operating Characteristic), AUC (Area under the curve)



		Predicción	
		Positivos	Negativos
Observación	Positivos	Verdaderos Positivos (VP)	Falsos Negativos (FN)
	Negativos	Falsos Positivos (FP)	Verdaderos Negativos (VN)

Recall, Precision, Accuracy

$$\text{Recall} = \frac{tp}{tp + fn}$$

$$\text{Precision} = \frac{tp}{tp + fp}$$

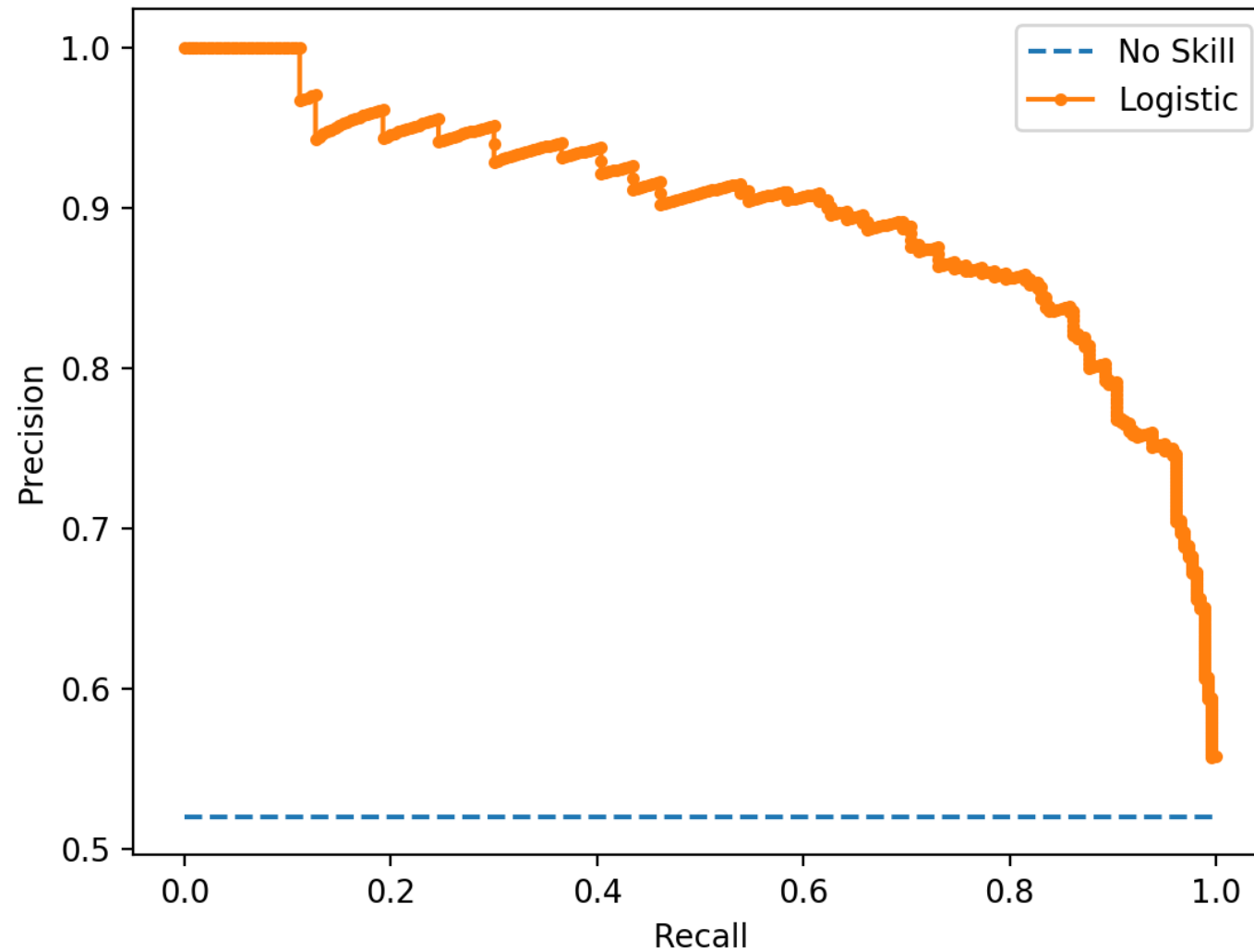
$$\text{Specificity} = \frac{tn}{tn + fp}$$

$$\text{Accuracy} = \frac{tp + tn}{tp + tn + fp + fn}$$

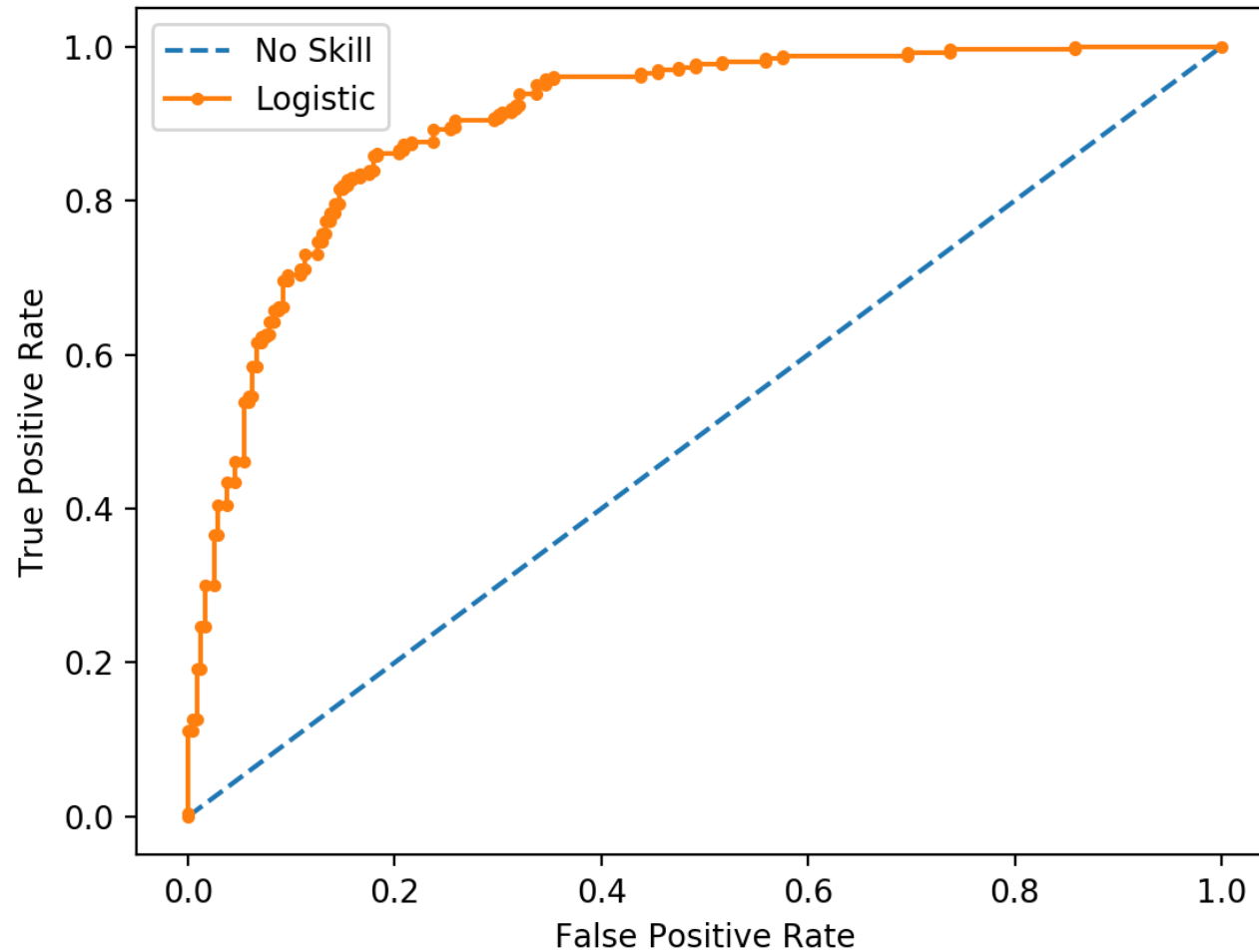
- **Recall: Sentivity** : Sensibilidad
- **Precision**: Precisión
- **Accuracy**: Exactitud

- **Recall**: Qué porcentaje de los verdaderos positivos (clientes que se fugaron) recupera el modelo. Capacidad de recuperar clase positiva.
- **Precision**: Qué porcentaje representan los verdaderos positivos (clientes que se fugaron) respect al total de positivos que predice el modelo. Mide contaminación de la predicción.
- **Specificity**: Qué porcentaje de los verdaderos negativos (clientes que no se fugaron) recupera el modelo. Capacidad de recuperar clase negativa.
- **Accuracy**: Porcentaje de clasificados correctamente.

Curva de Precision vs Recall



Curva ROC



True positive rate = Recall

False positive rate = 1 - Specificity

The background is a complex, abstract digital network. It features a dense web of thin, reddish-brown lines connecting numerous small, glowing nodes. The nodes are primarily white and yellow, with some appearing as bright cyan or blue spheres. A central node is particularly prominent, emitting a bright orange-yellow glow. The overall color palette is dark blue and black, with the network elements providing a high-contrast, futuristic aesthetic. Faint, vertical columns of binary code (0s and 1s) are visible in the background, adding to the digital theme.

Taller