



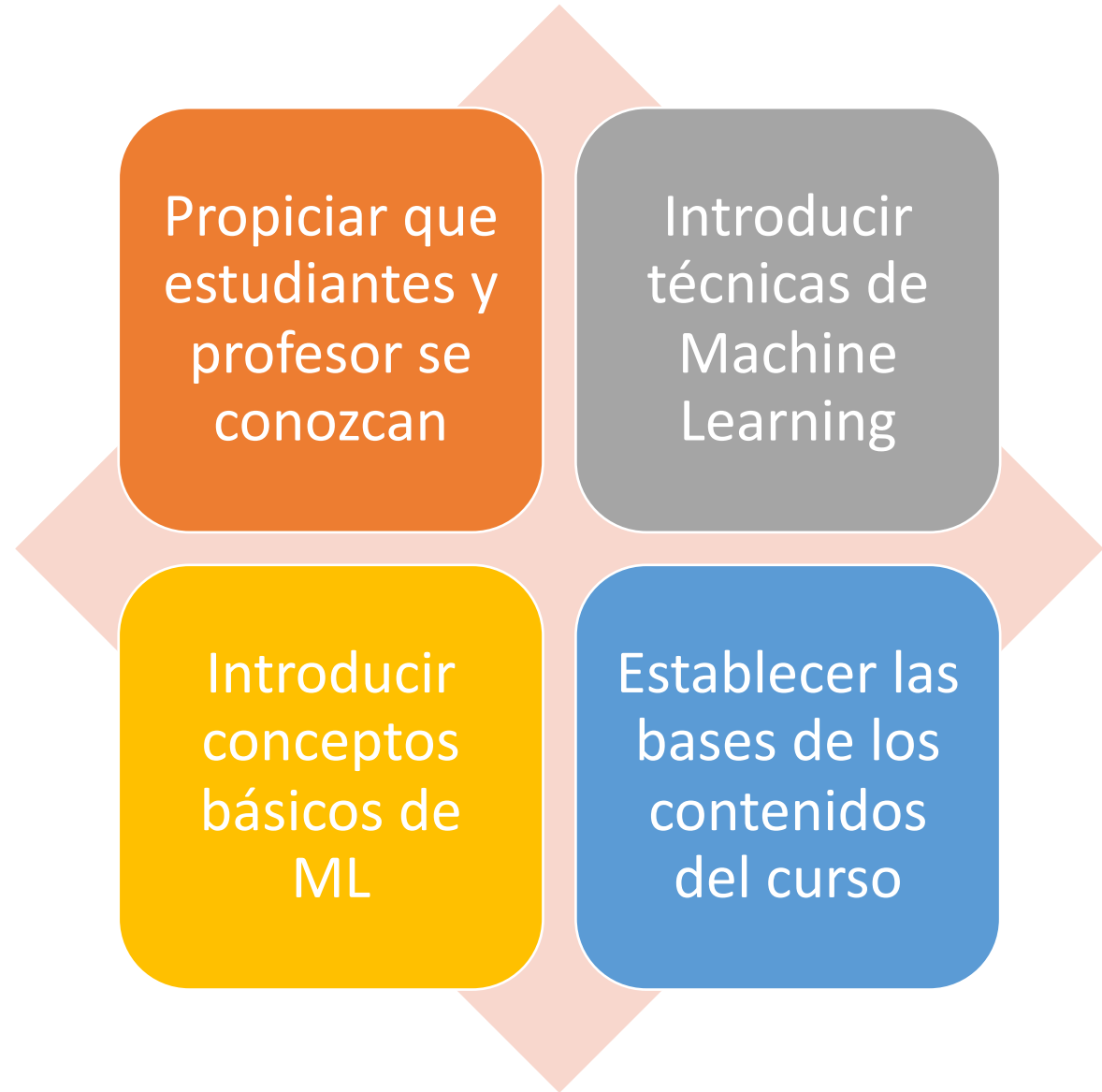
# Inteligencia Artificial LFIS419

Clase 2: Visión general de modelos de machine learning

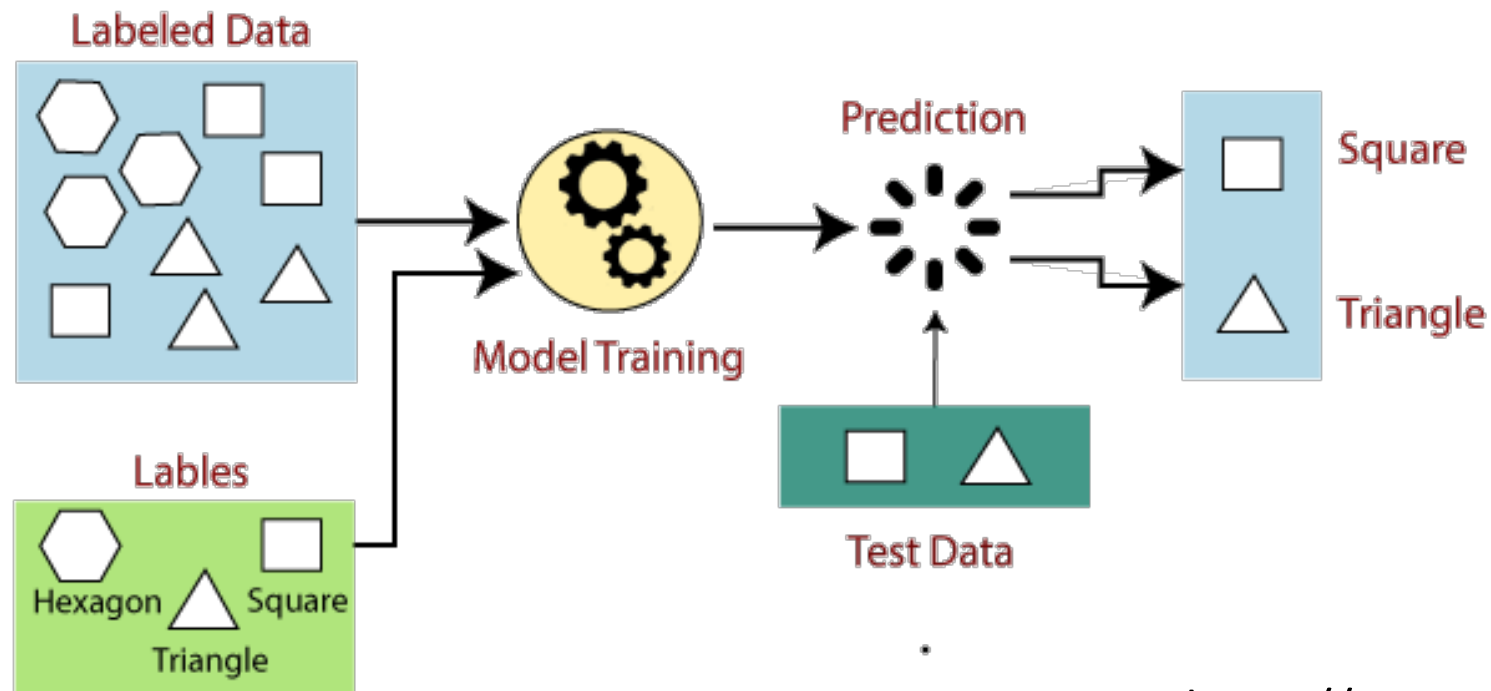
Profesor: Jorge Arevalo ([jorge.arevalo@uv.cl](mailto:jorge.arevalo@uv.cl) [jab@meteo.uv.cl](mailto:jab@meteo.uv.cl))

Martes 21 de marzo de 2023

# Objetivos de la sesión

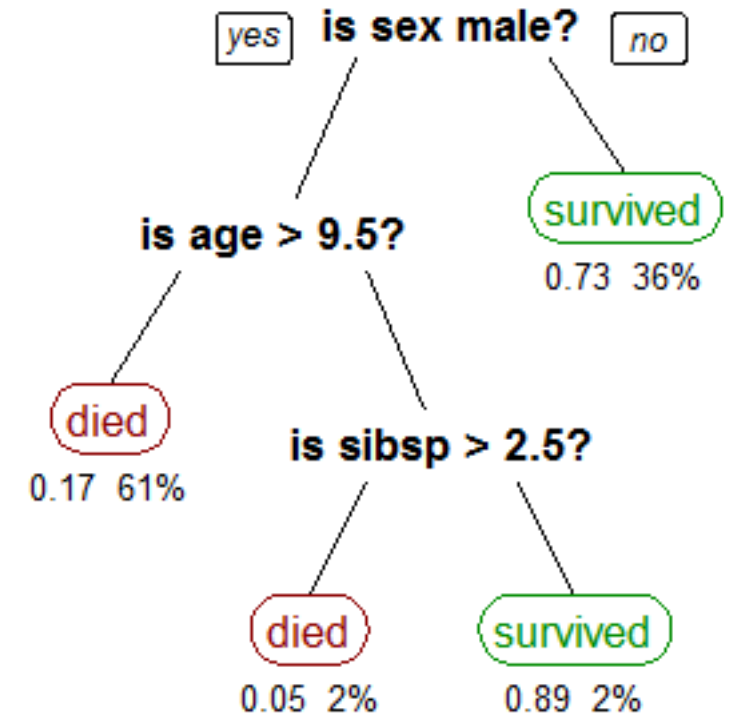
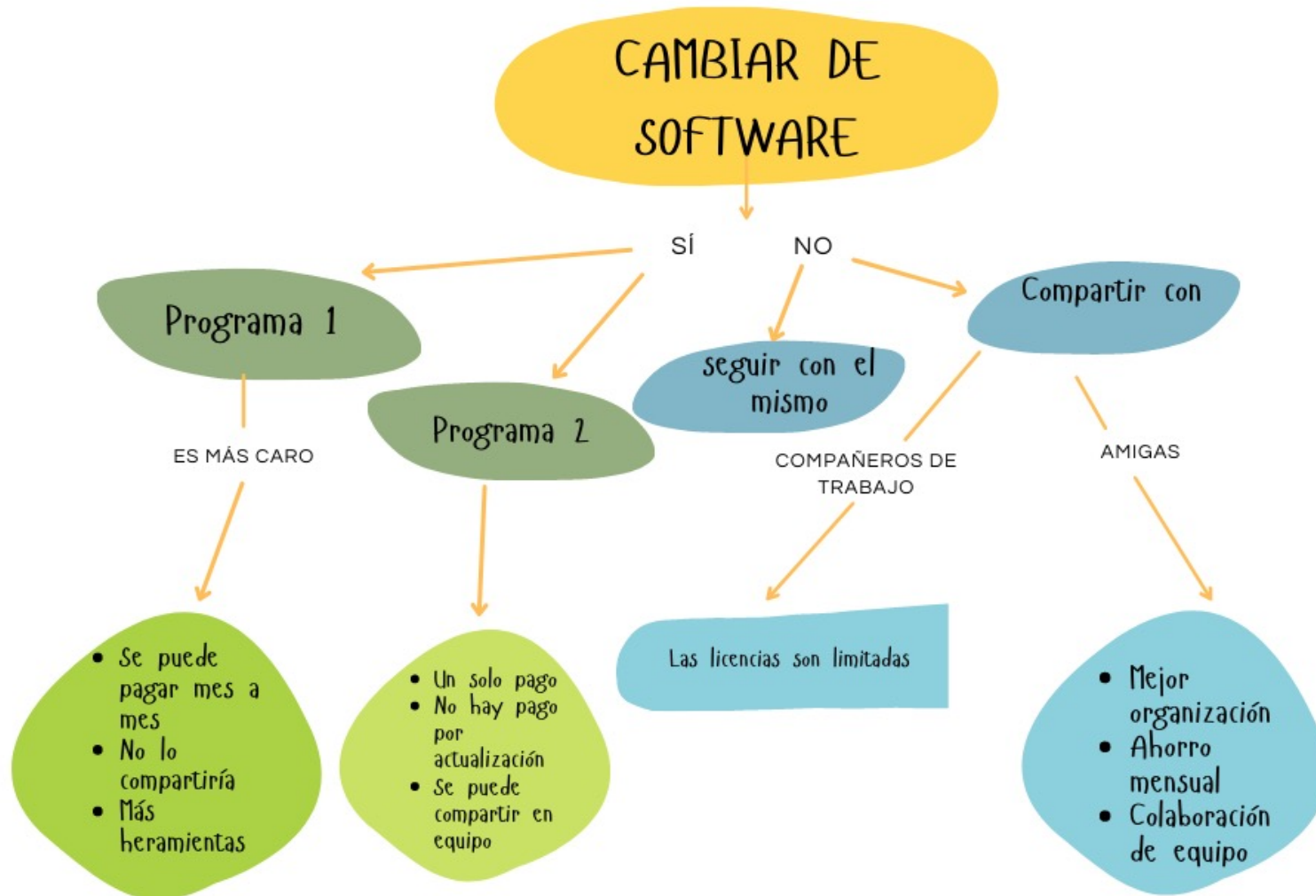


# Modelos supervisados de clasificación



- <https://www.javatpoint.com/supervised-machine-learning>

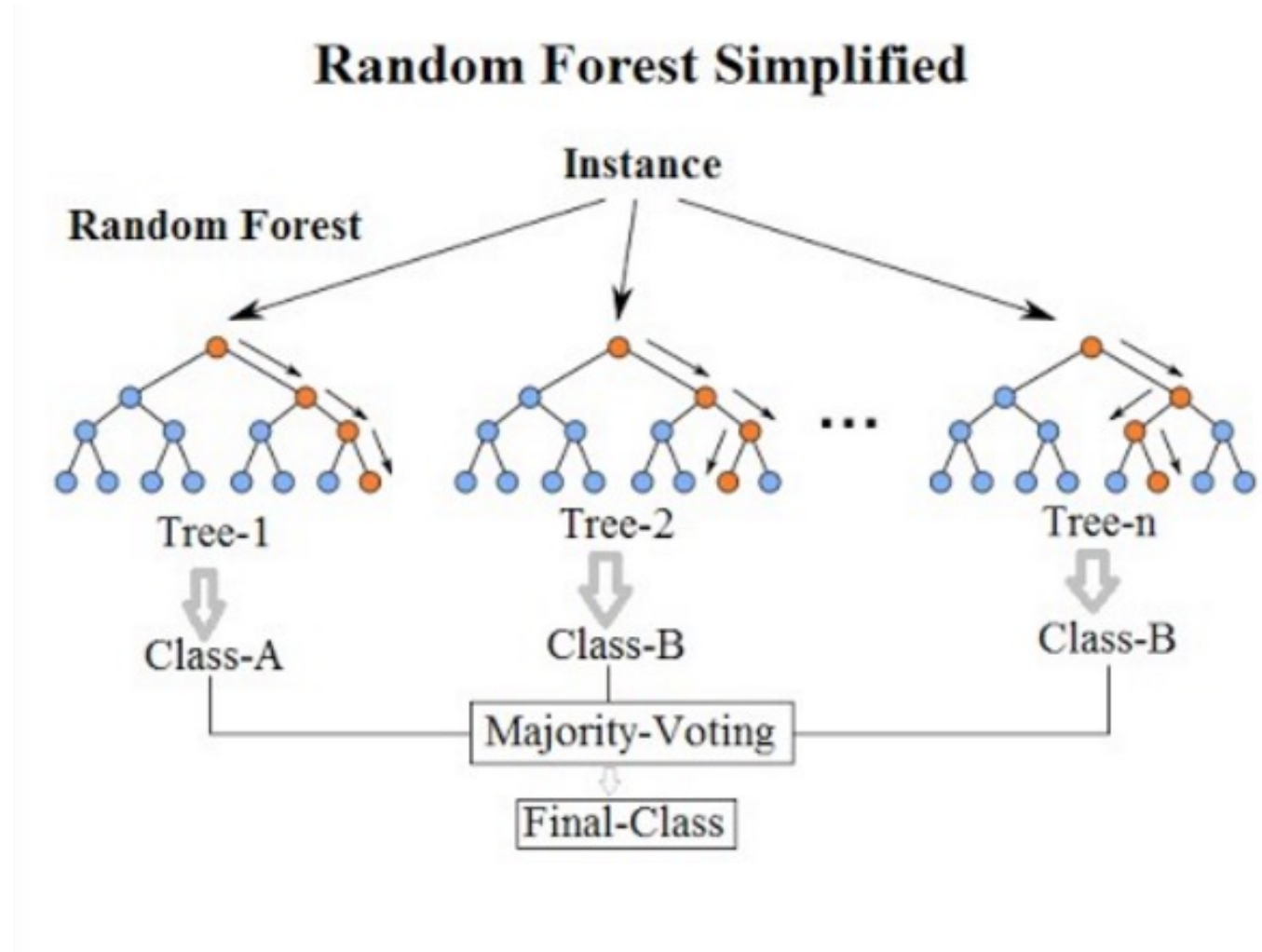
# ÁRBOL DE DECISIONES EJEMPLO



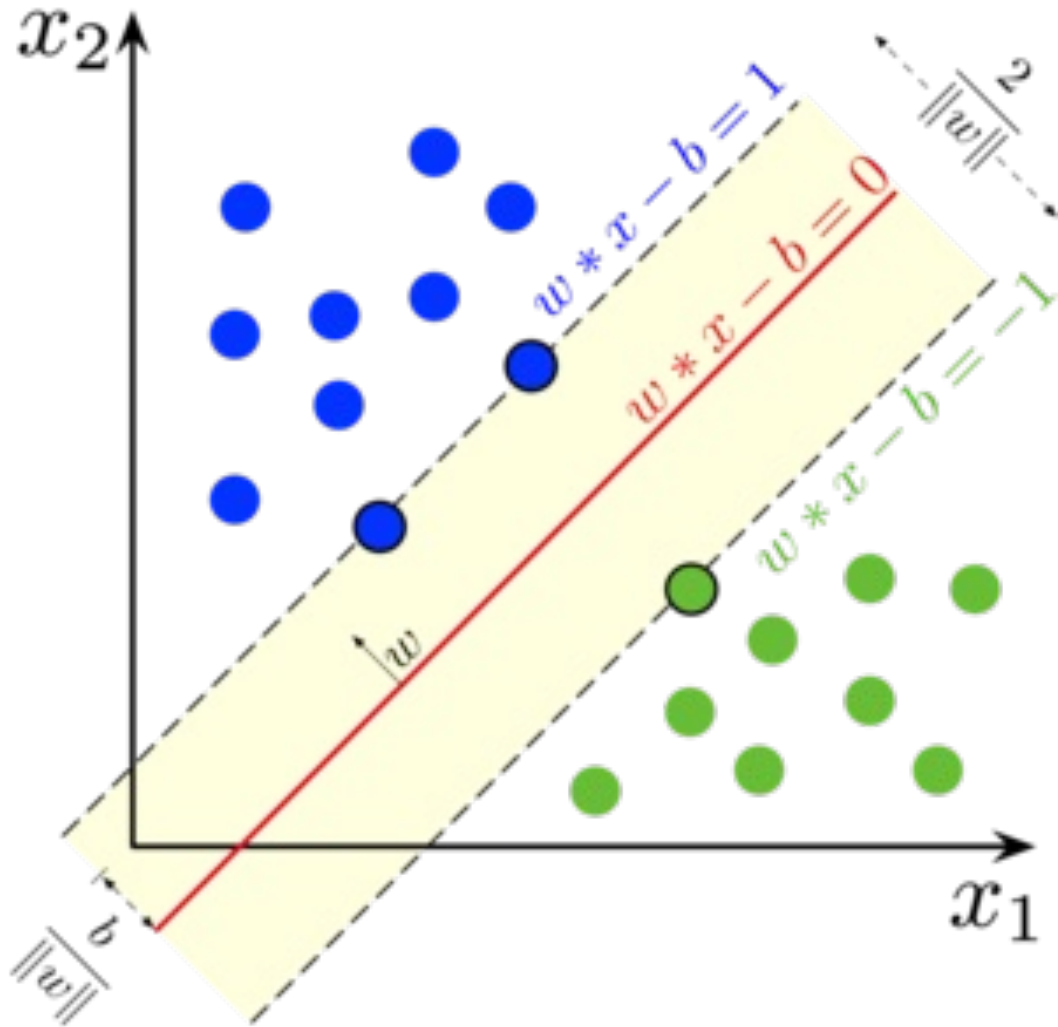
[https://es.wikipedia.org/wiki/Aprendizaje\\_basado\\_en\\_%C3%A1rboles\\_de\\_decisi%C3%B3n](https://es.wikipedia.org/wiki/Aprendizaje_basado_en_%C3%A1rboles_de_decisi%C3%B3n)



# Random Forest (y otros)

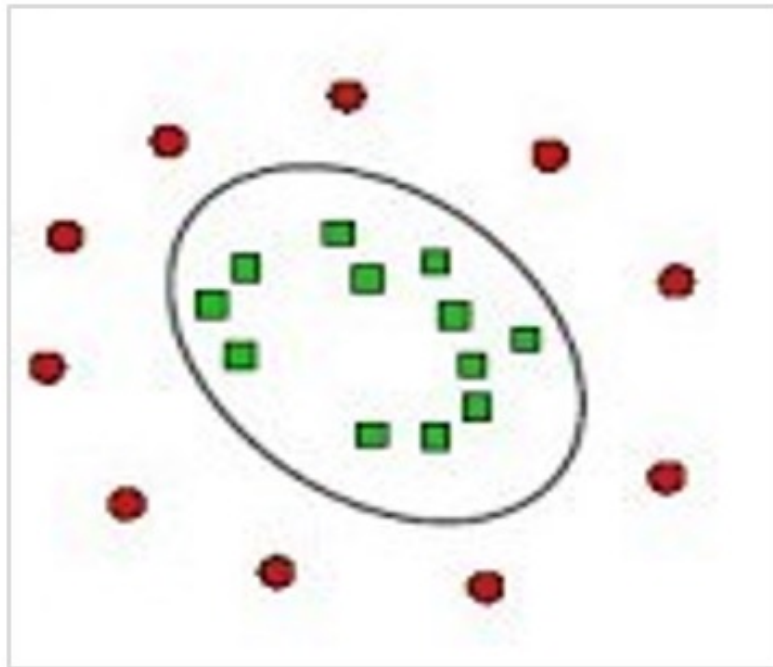


# Support Vector Machine

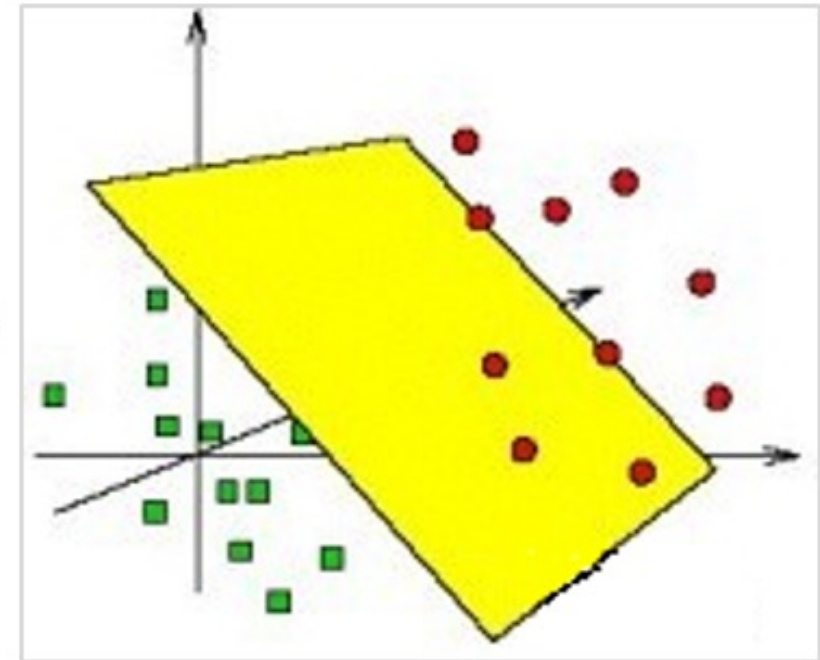
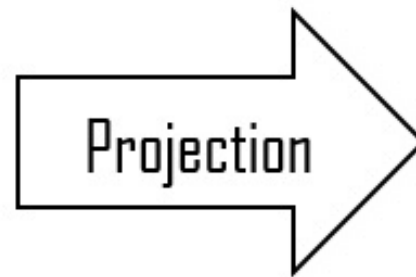


<https://encyclopedia.pub/entry/29353>

# Support Vector Machine



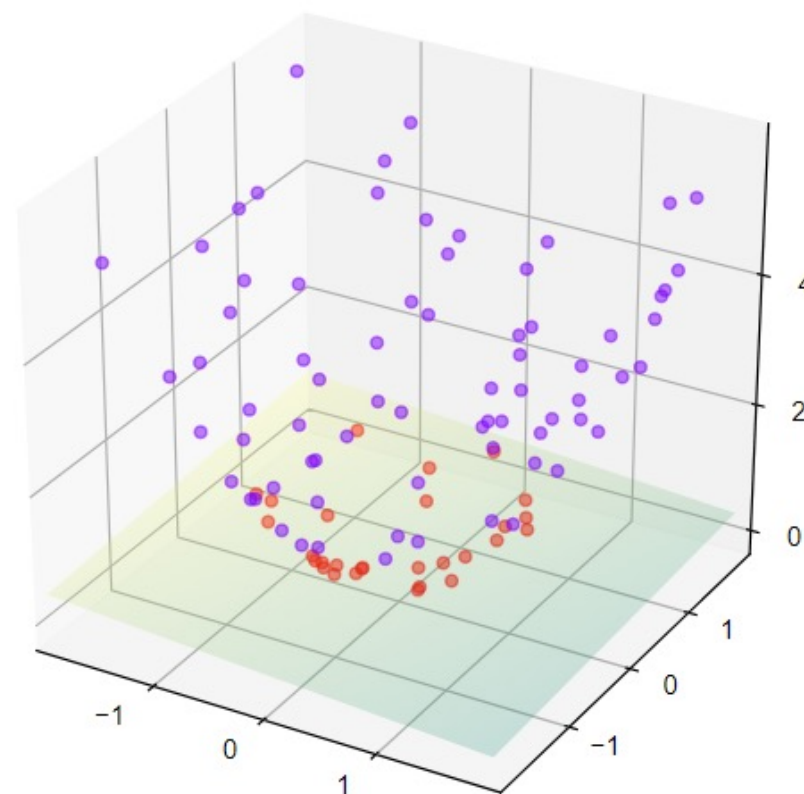
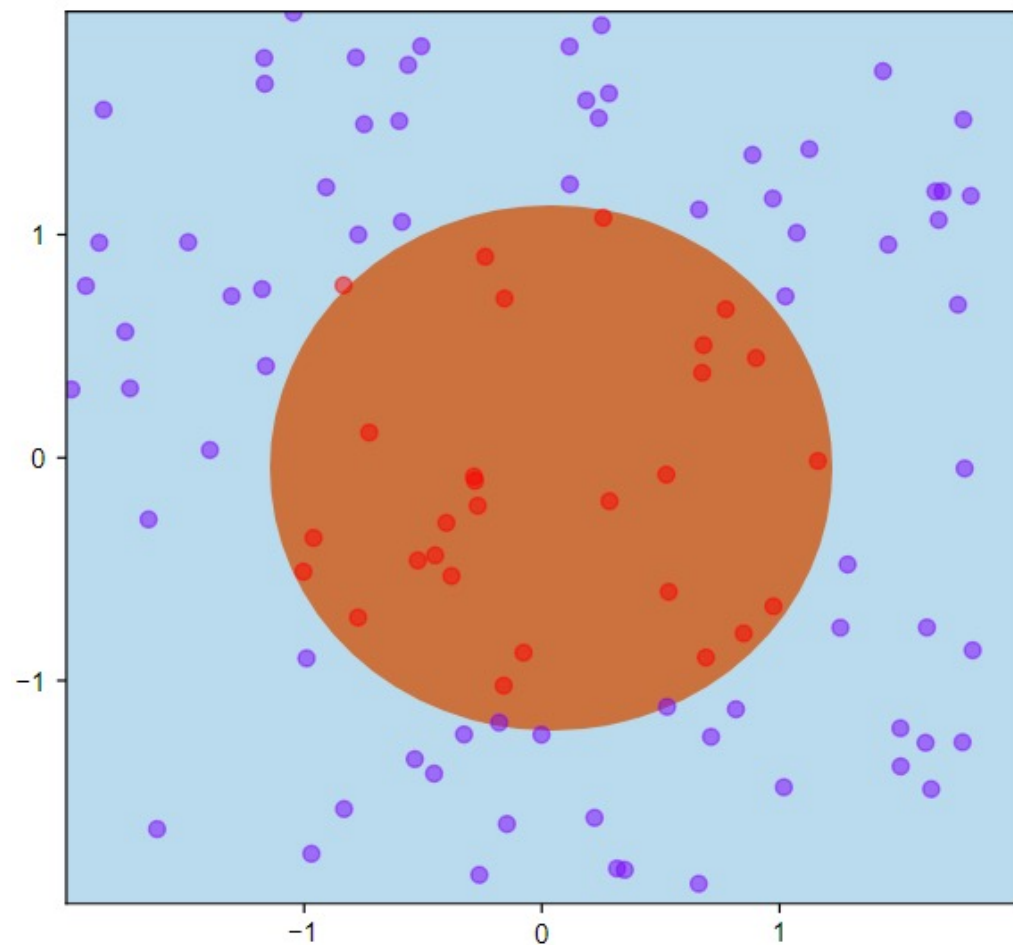
Complex segmentation in low-dimensional space



Easy segmentation in high-dimensional space

<https://forum.huawei.com/enterprise/en/machine-learning-algorithms-support-vector-machine-svm/thread/722247-895>

# Kernel cuadrático

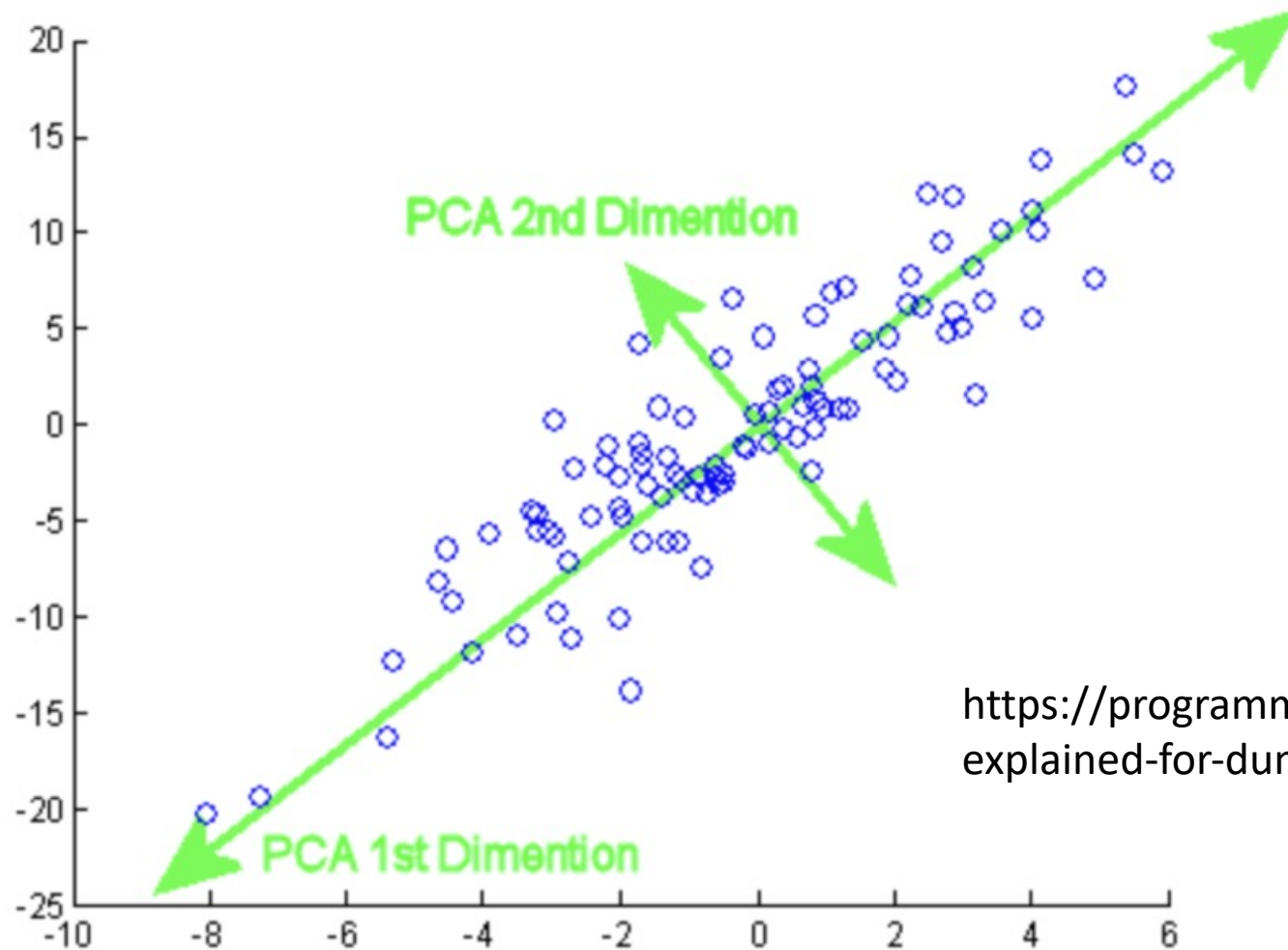


<https://encyclopedia.pub/entry/29353>



# Reducción de dimensionalidad

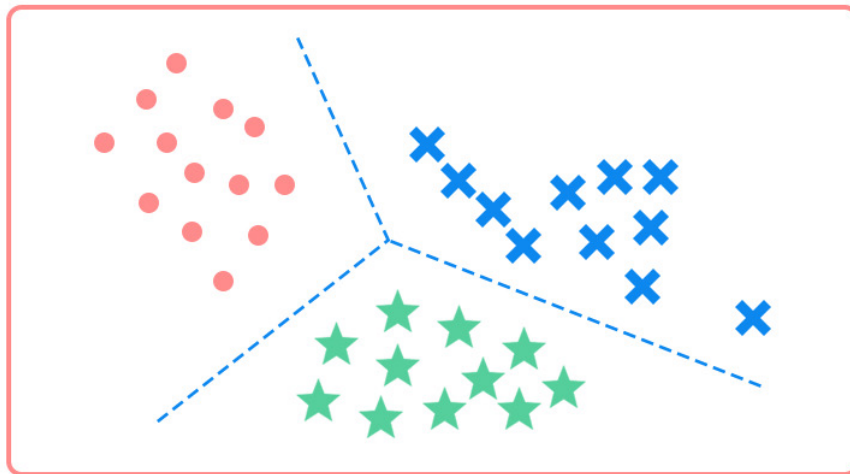
# Análisis de Componentes Principales



<https://programmatically.com/principal-components-analysis-explained-for-dummies/>

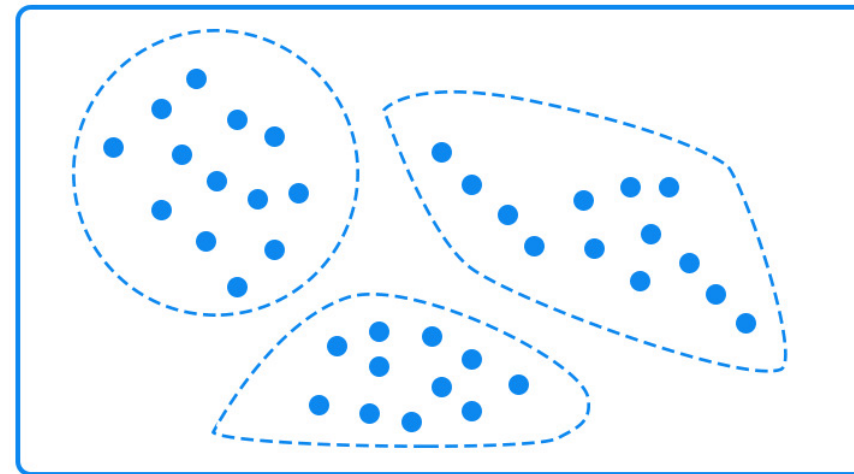
# Modelos no supervisionados

Classification



Supervised learning

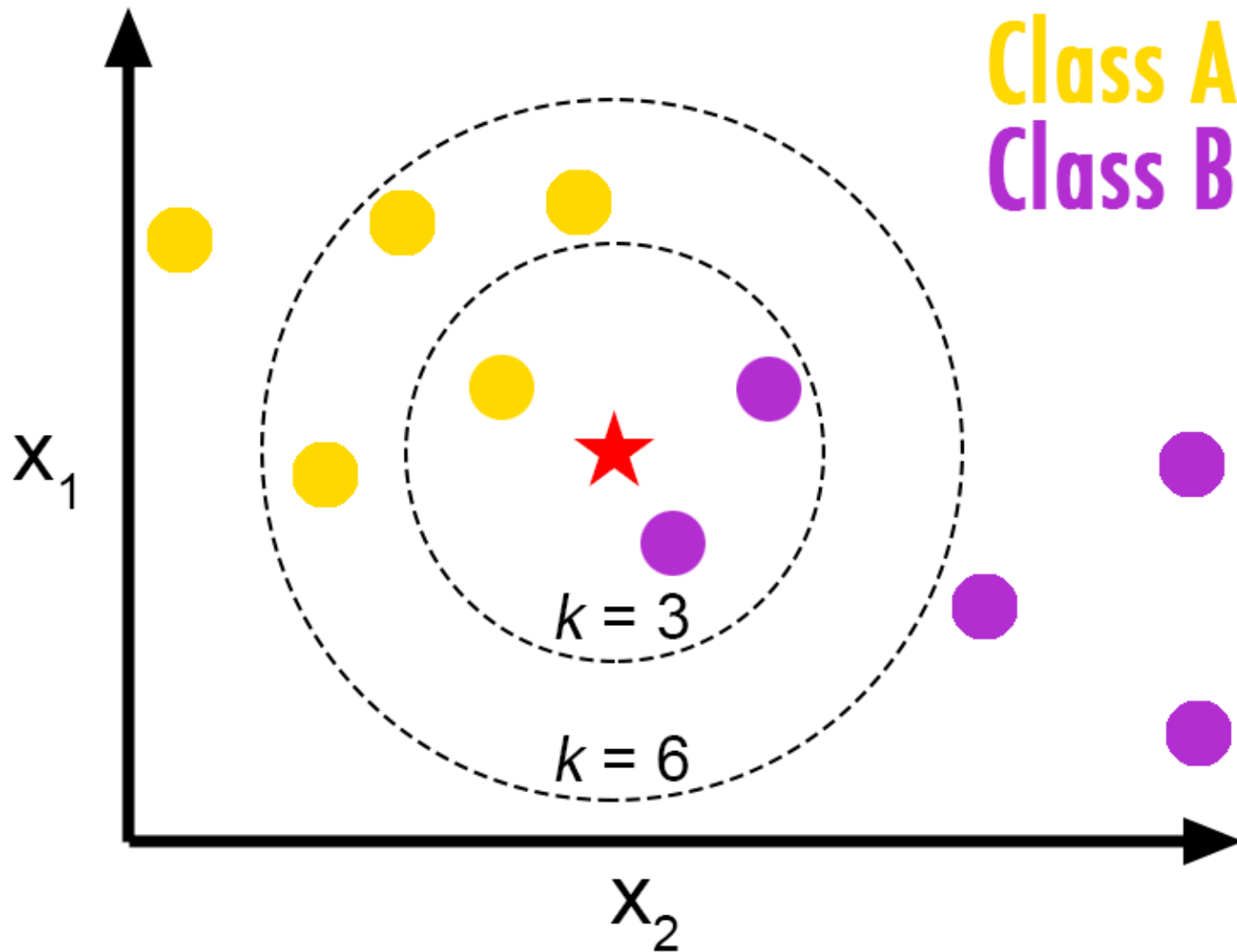
Clustering



Unsupervised learning

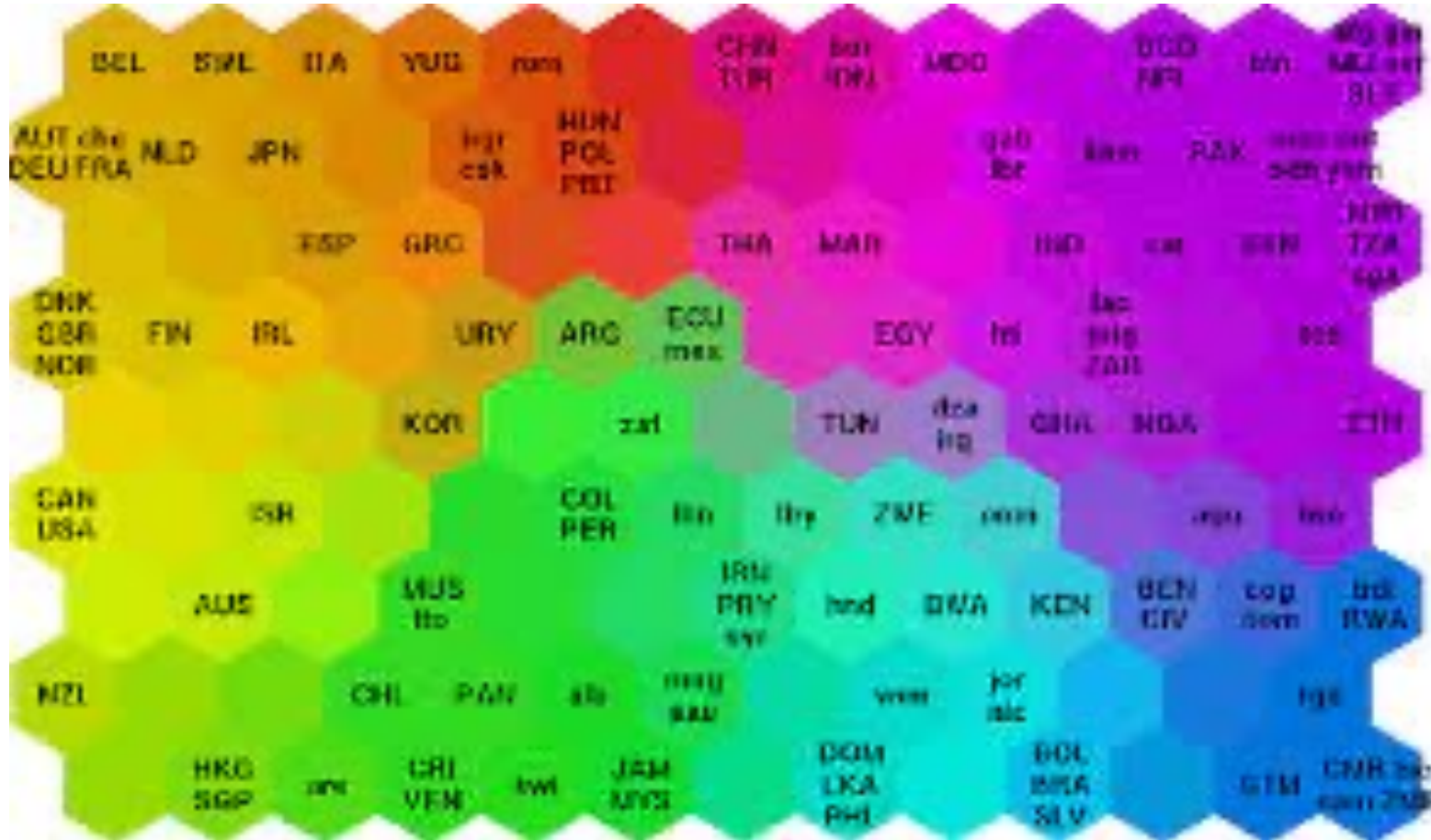
- <https://analystprep.com/study-notes/cfa-level-2/quantitative-method/supervised-machine-learning-unsupervised-machine-learning-deep-learning/>

# K-Nearest Neighbors



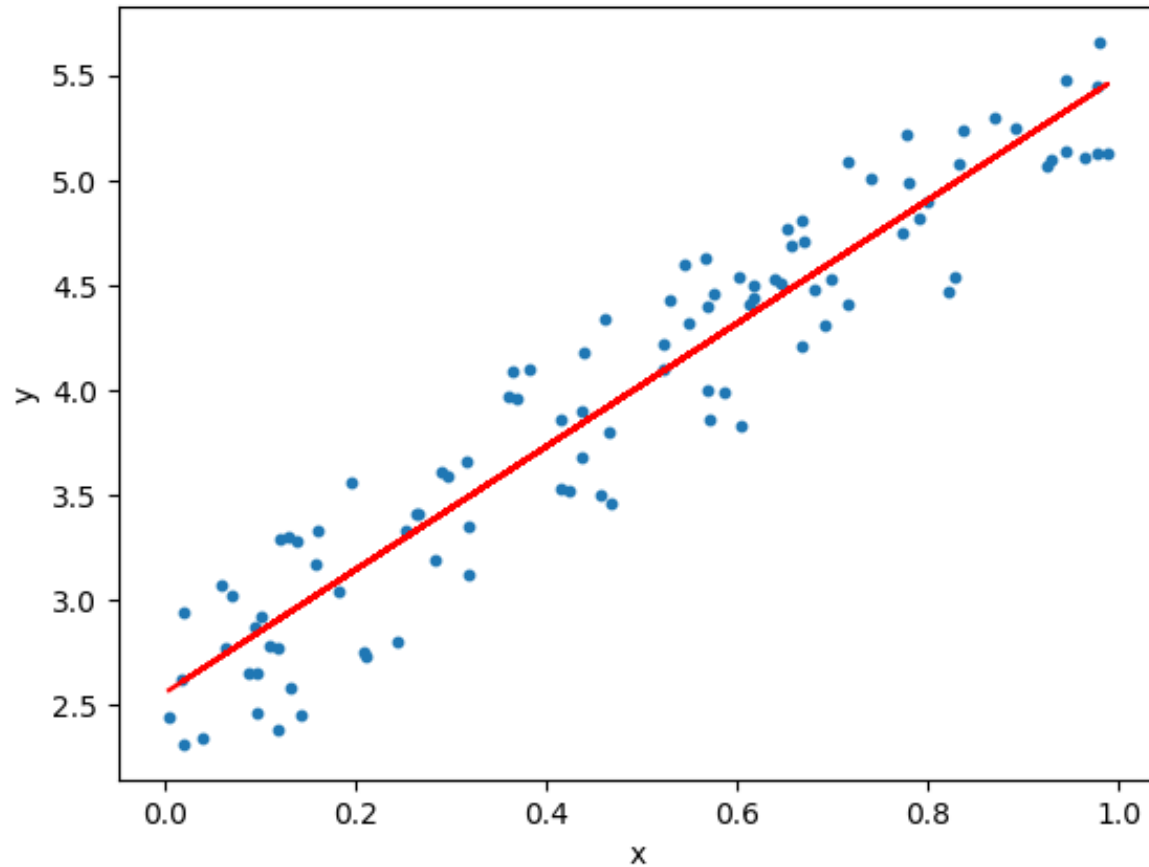
<https://pythondiario.com/2018/01/introduccion-al-machine-learning-9-k.html>

# Self Organizing Maps



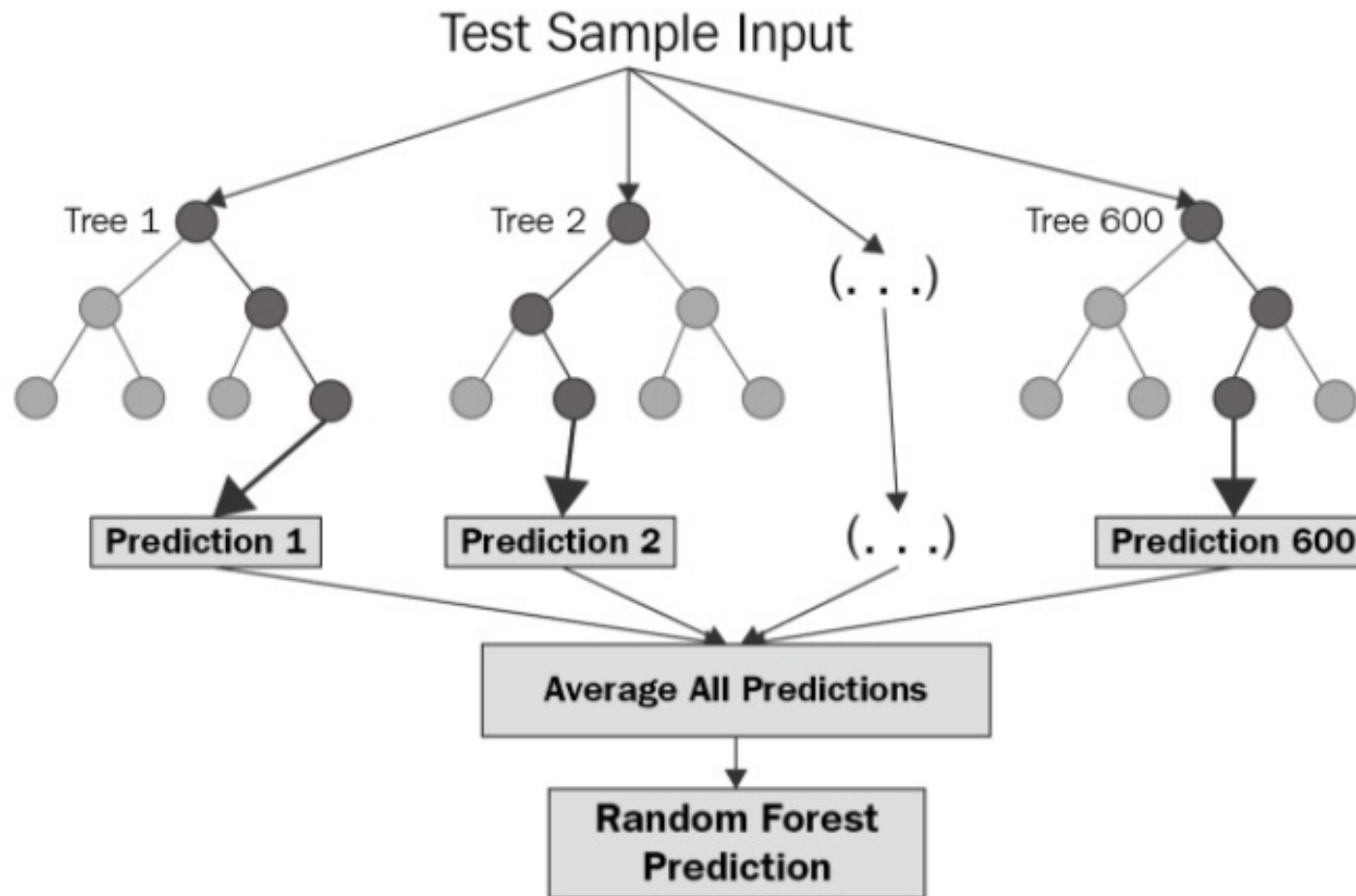


# Regresión Lineal



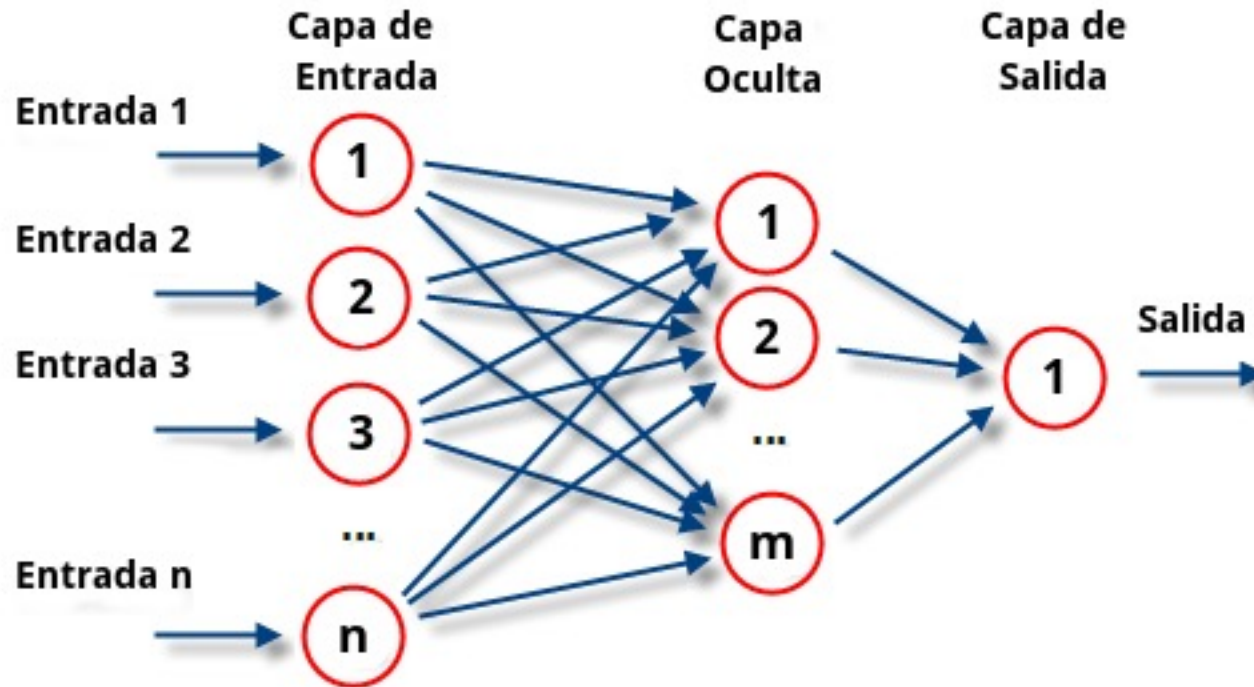
<https://towardsdatascience.com/linear-regression-using-python-b136c91bf0a2?gi=1491c0aa25fb>

# Árboles y derivados



<https://levelup.gitconnected.com/random-forest-regression-209c0f354c84?gi=e5c0cdbce98b>

# Redes neuronales y Deep Learning



<https://www.atriainnovation.com/que-son-las-redes-neuronales-y-sus-funciones/>