

Made it easy!

# Machine Learning Algorithms Simplified!

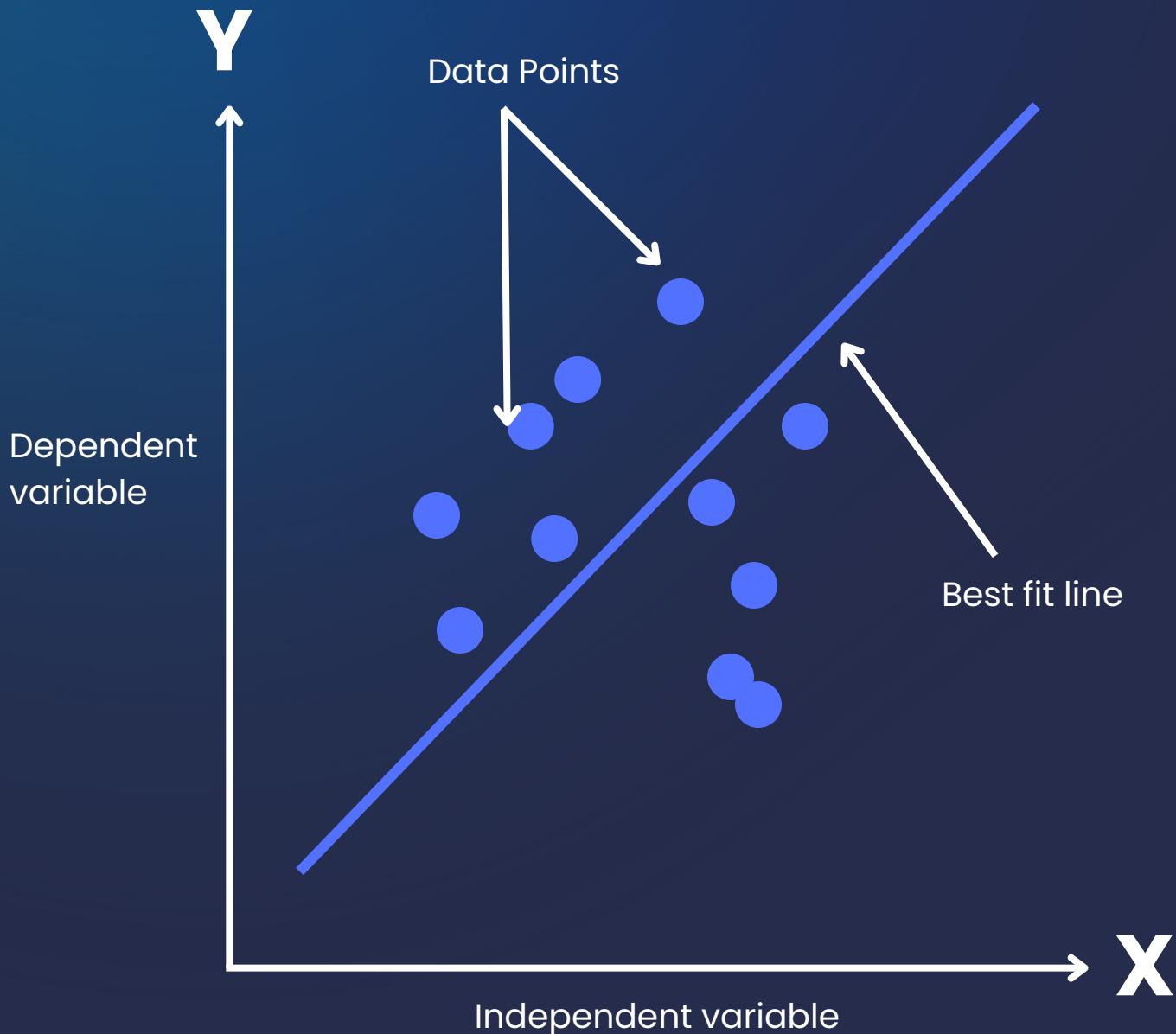


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# 1 Linear Regression



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# 1 Linear Regression

Used for predicting continuous outcomes. It finds a line that best fits the data points.

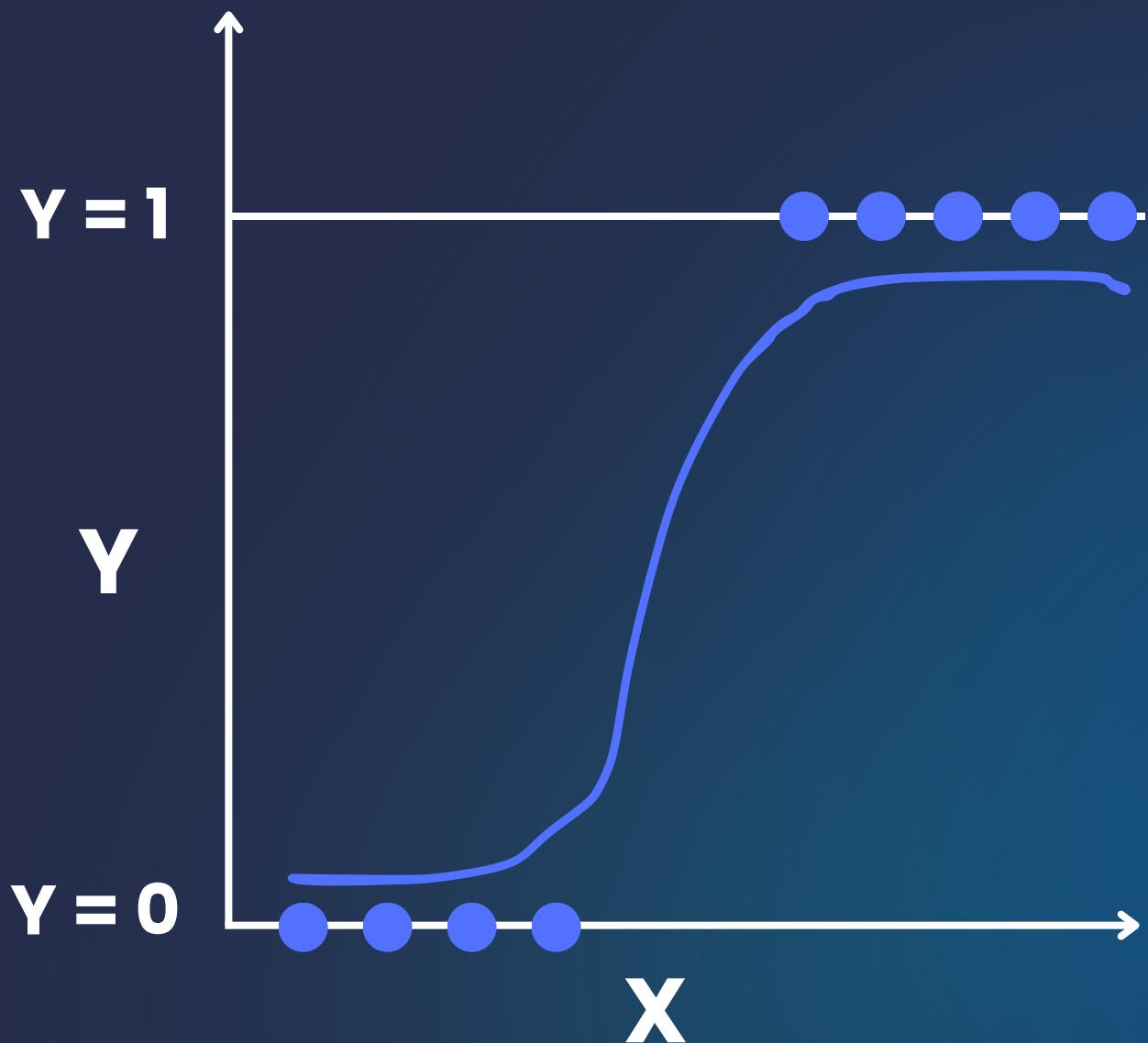
Example: "Predicting house prices based on the number of bedrooms. If the price tends to increase as the number of bedrooms increases, we can draw a line to predict the price of a house based on its bedrooms."



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# 2 Logistic Regression



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# 2 Logistic Regression

Great for binary classification (yes/no).  
It predicts probabilities using an S-shaped curve.

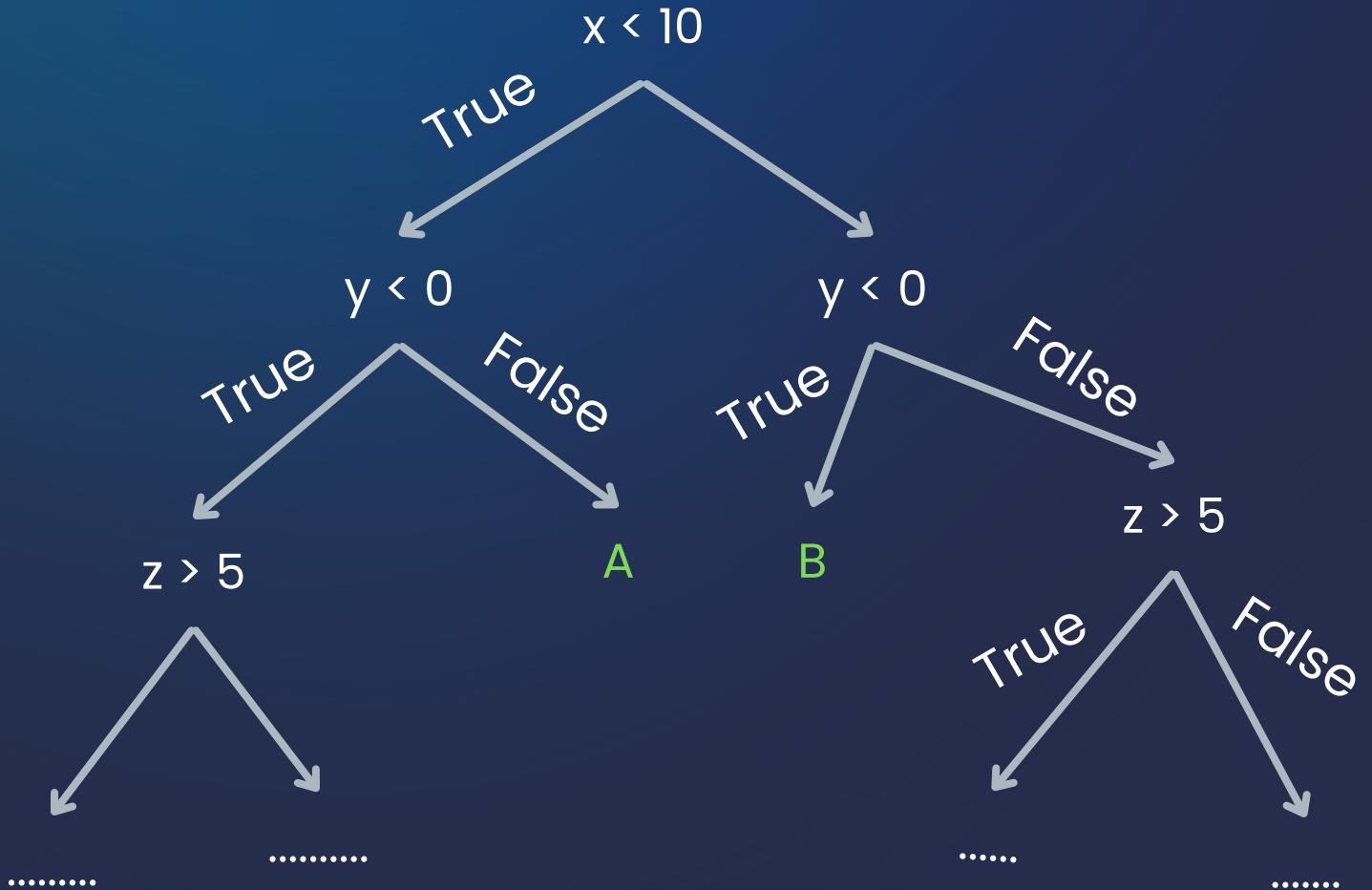
Example: "Classifying if an email is spam or not. The algorithm predicts the probability of an email being spam based on keywords, sender, and other features."



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# 3 Decision Trees



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# 3 Decision Trees

This algorithm splits data into branches to make decisions. Simple and easy to understand.

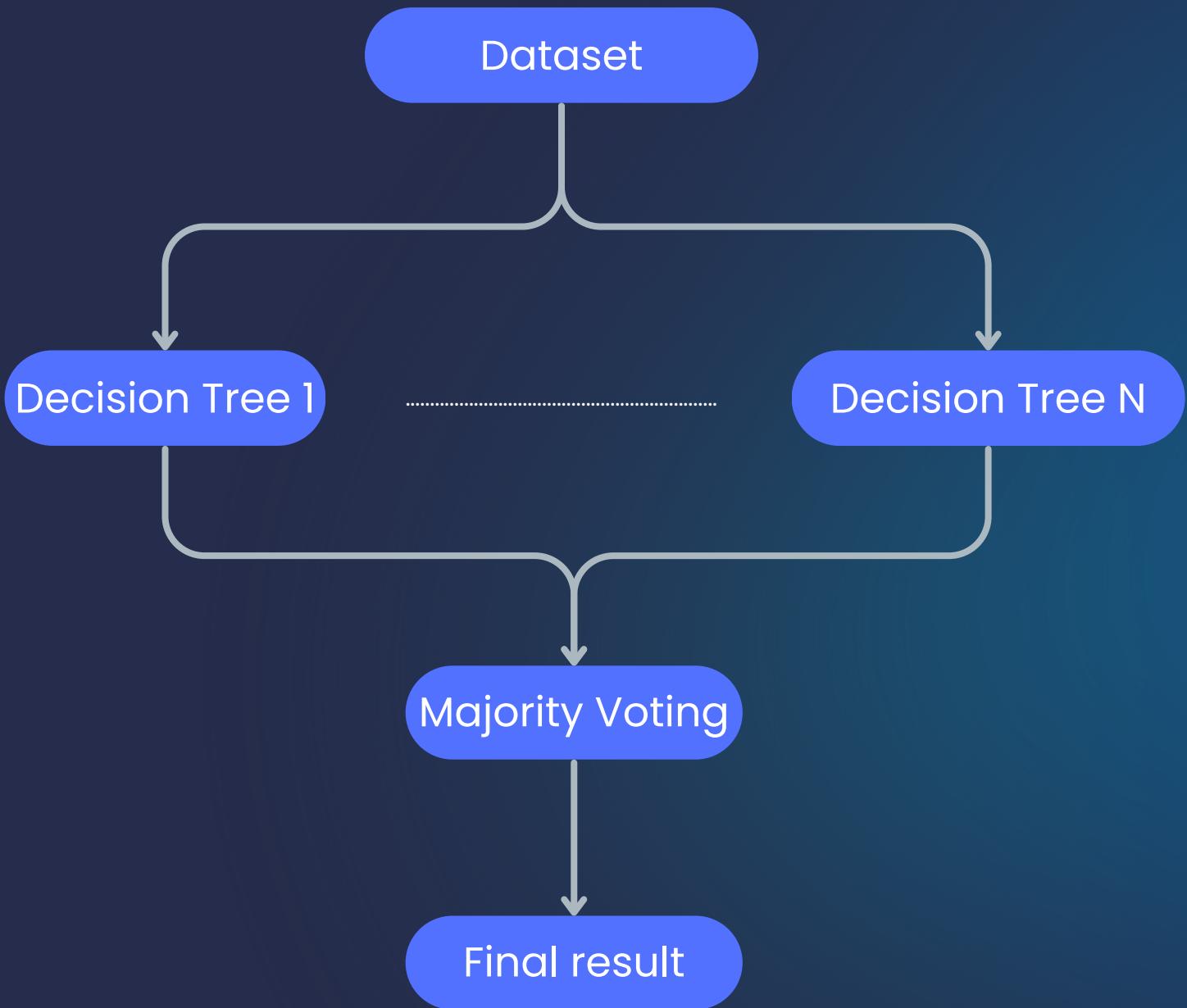
Example: "Imagine deciding what to wear. You ask, 'Is it cold?' If yes, you wear a jacket; if no, you ask, 'Is it raining?' If yes, take an umbrella. It works like a series of yes/no questions."



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# 4 Random Forest



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# 4 Random Forest

A forest of decision trees! It combines multiple trees to improve accuracy and reduce overfitting.

Example: "It's like asking multiple friends for advice and then going with the majority opinion. Random Forest builds several decision trees and combines their predictions for a more accurate result."



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# 5 K-Nearest Neighbors



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# 5 K-Nearest Neighbors

It classifies data based on the 'neighbors' closest to it. Simple yet powerful.

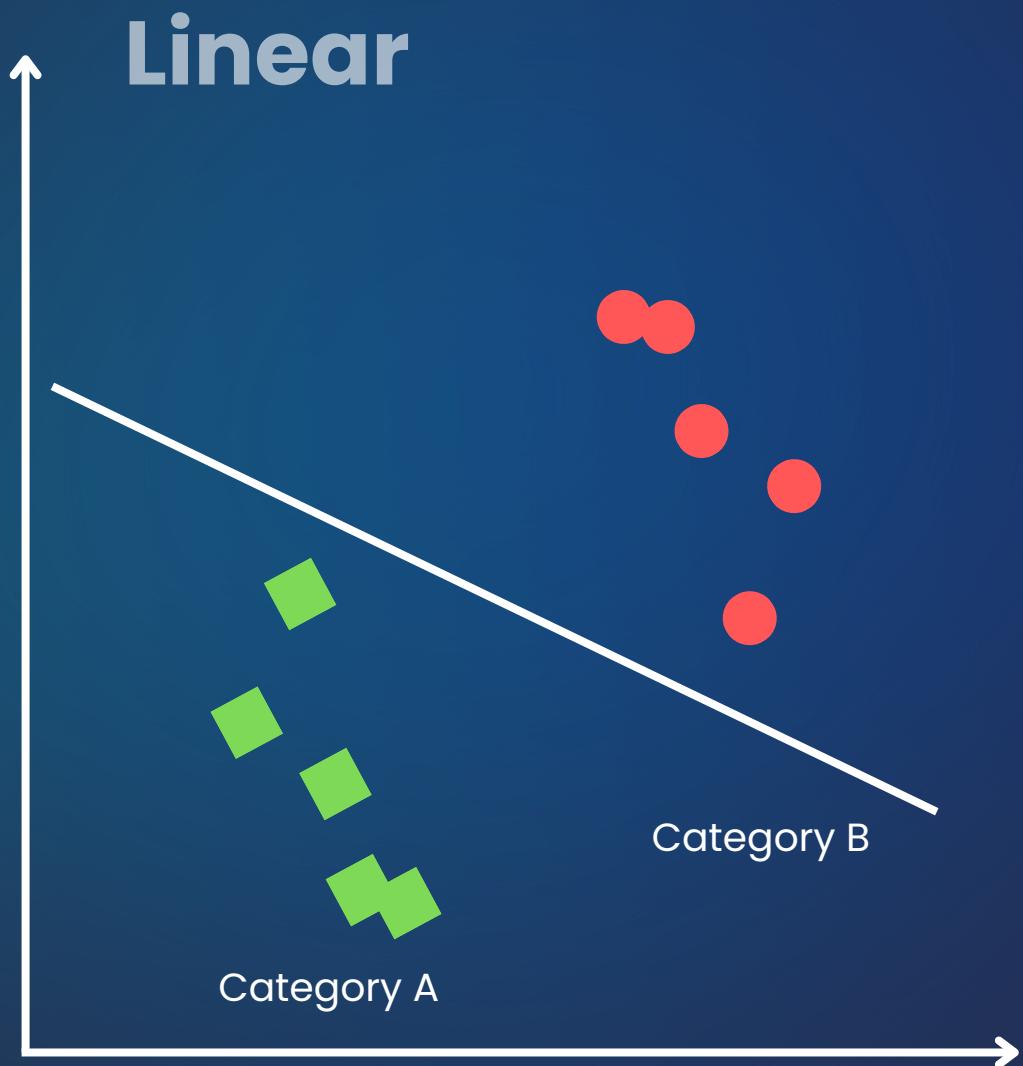
Example: "Classifying a new dish at a potluck. If it looks similar to pasta dishes, it's likely pasta. KNN groups the new dish with the closest ones it resembles."



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# 6 SVM

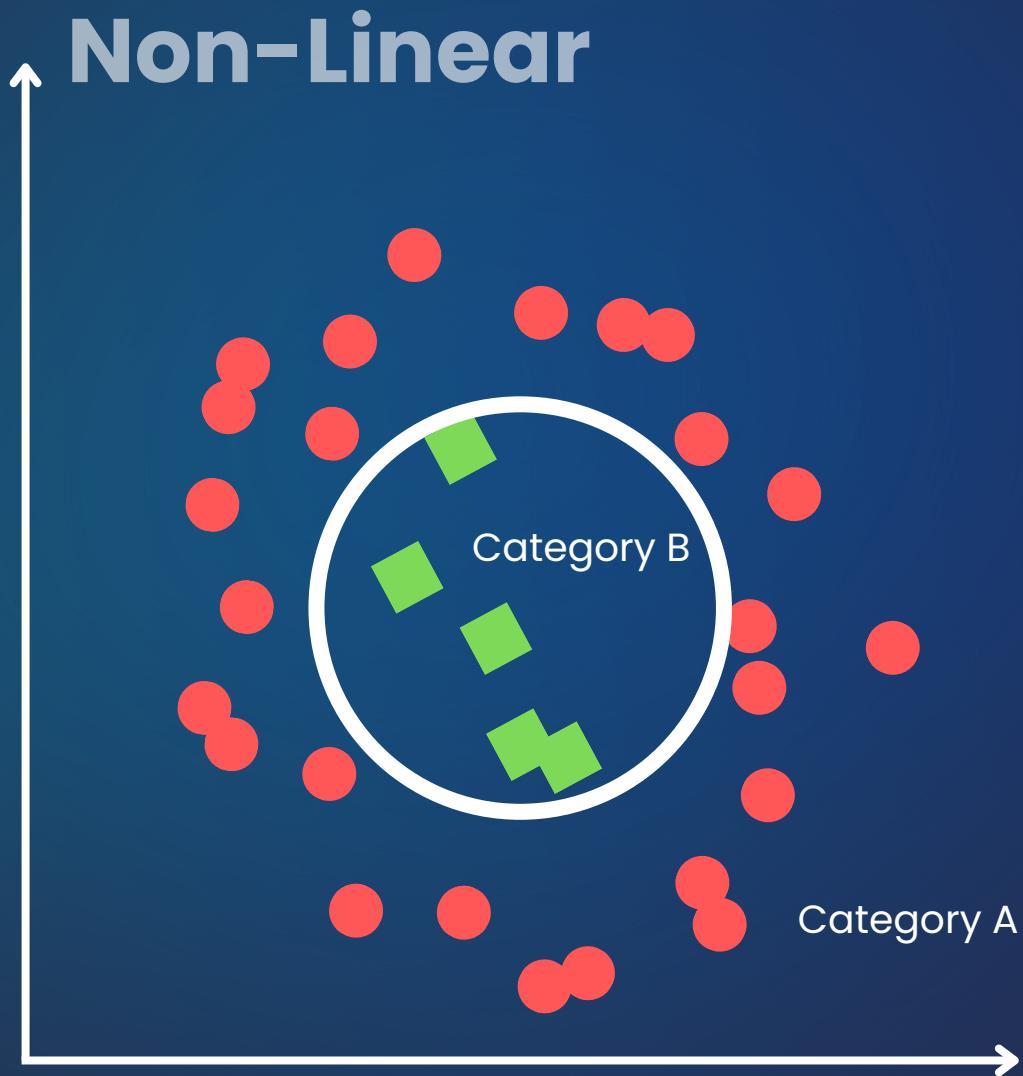


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# 6 SVM



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# 6 SVM support Vector Machines

Draws a line or plane that best separates data into classes. Great for high-dimensional spaces.

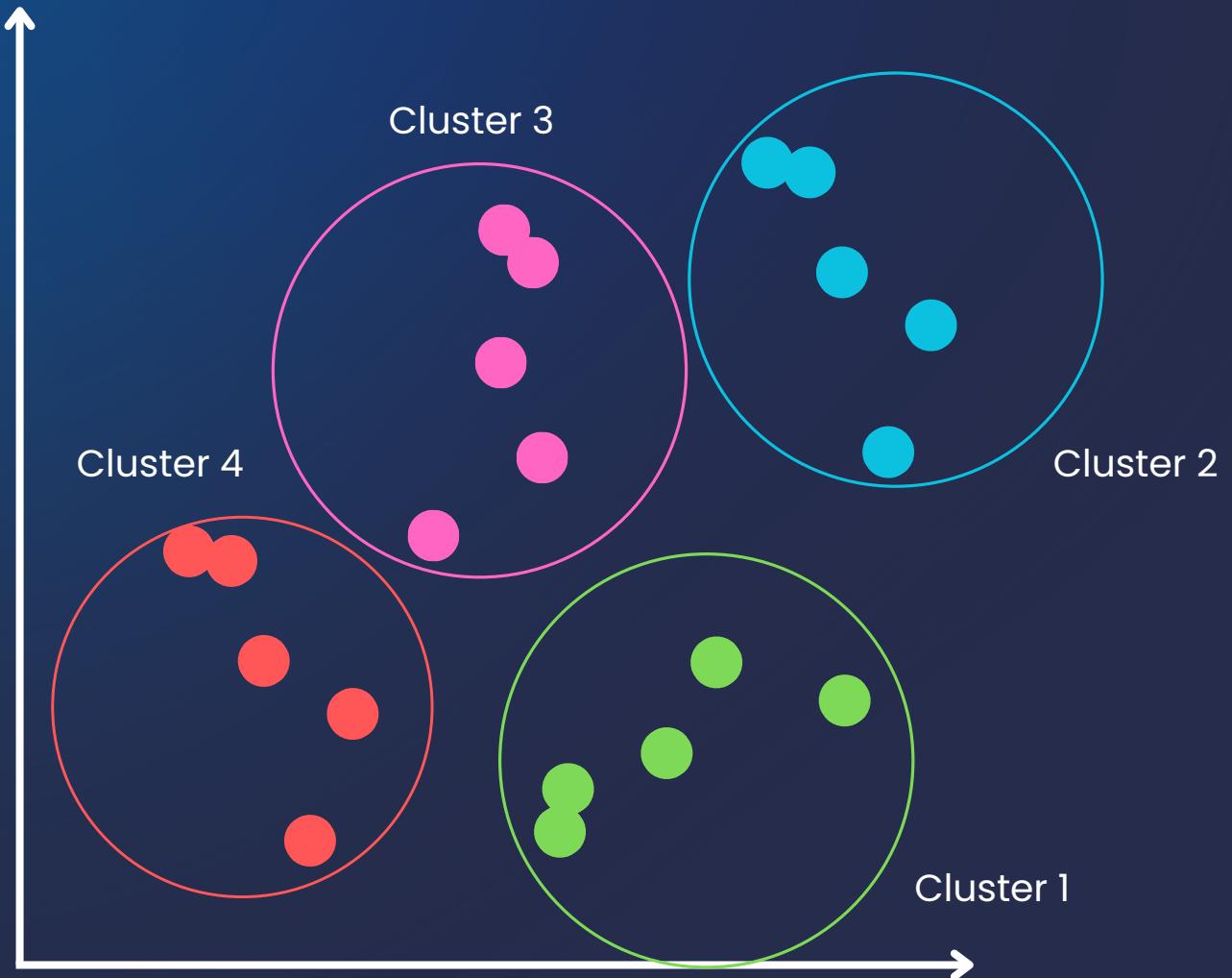
Example: "Imagine drawing a line in the sand to separate two types of seashells. SVM finds the best line (or boundary) that keeps the two categories as far apart as possible."



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# 7 K-Means Clustering



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# 7 K-Means Clustering

It groups data into clusters based on their similarities. Helpful in finding patterns.

Example: "Organizing a closet by grouping clothes. K-Means helps group items like shirts, pants, and shoes based on their similarities, making everything more organized."



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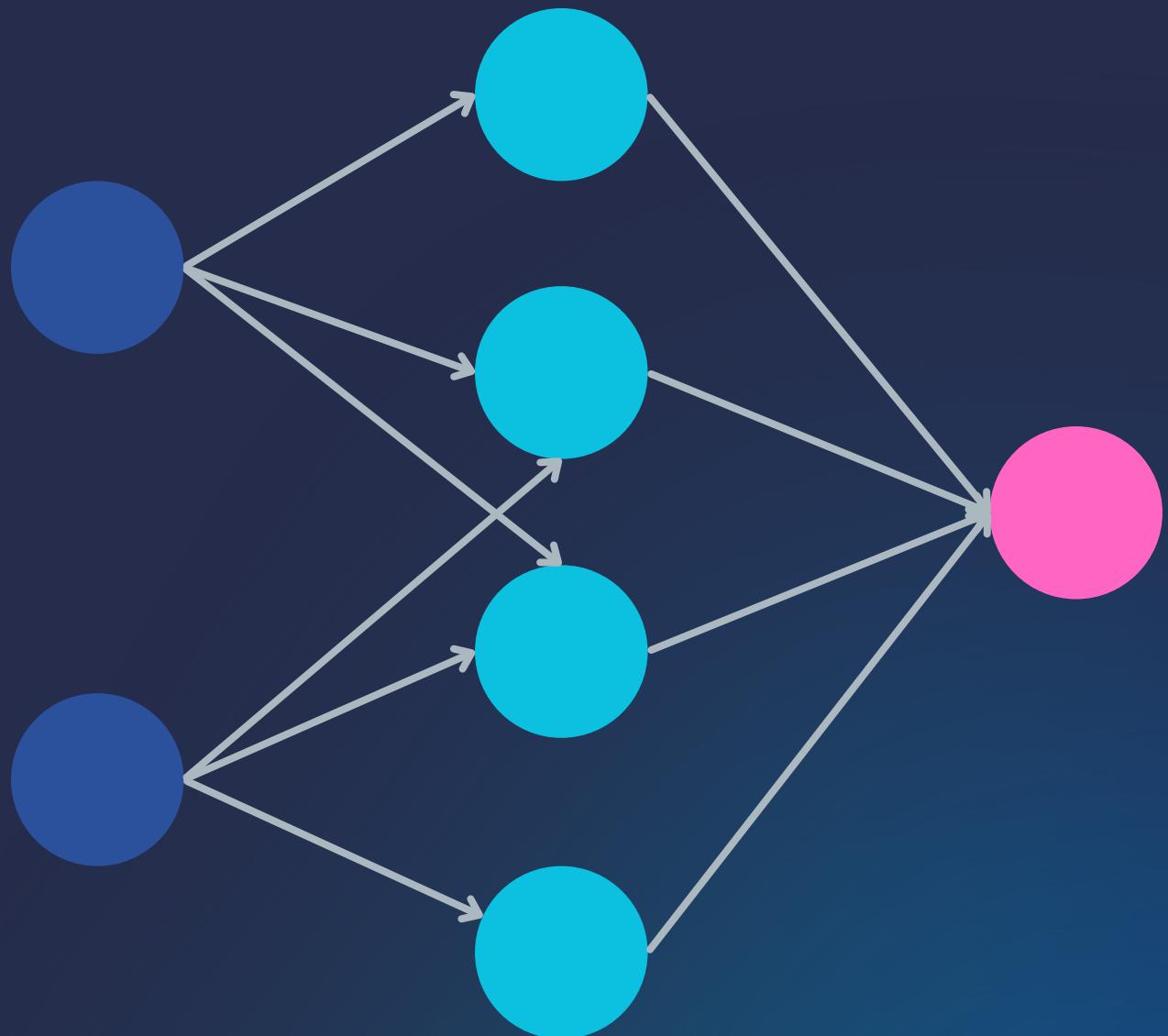


# 8 Neural Networks

Input Layer

Hidden Layer

Output Layer



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# 8 Neural Networks

Inspired by the human brain, neural networks can learn complex patterns in data.

Example: "Like how our brains learn from experiences, neural networks learn patterns in data. For example, it can learn to recognize a cat from many pictures by identifying patterns like fur, ears, and whiskers."



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# Which Algorithm Will You Try Next?

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