

## Applications of Support Vector Machine



Face detection



Text and hypertext  
categorization

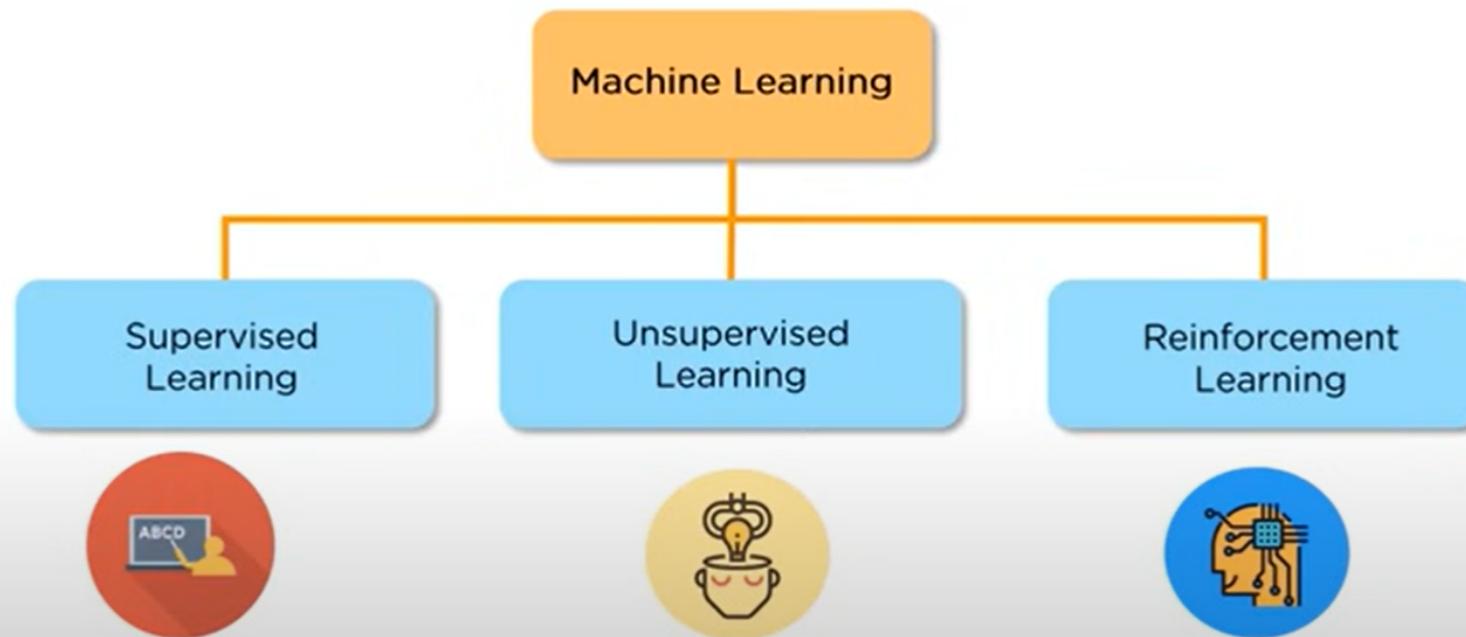


Classification of  
images

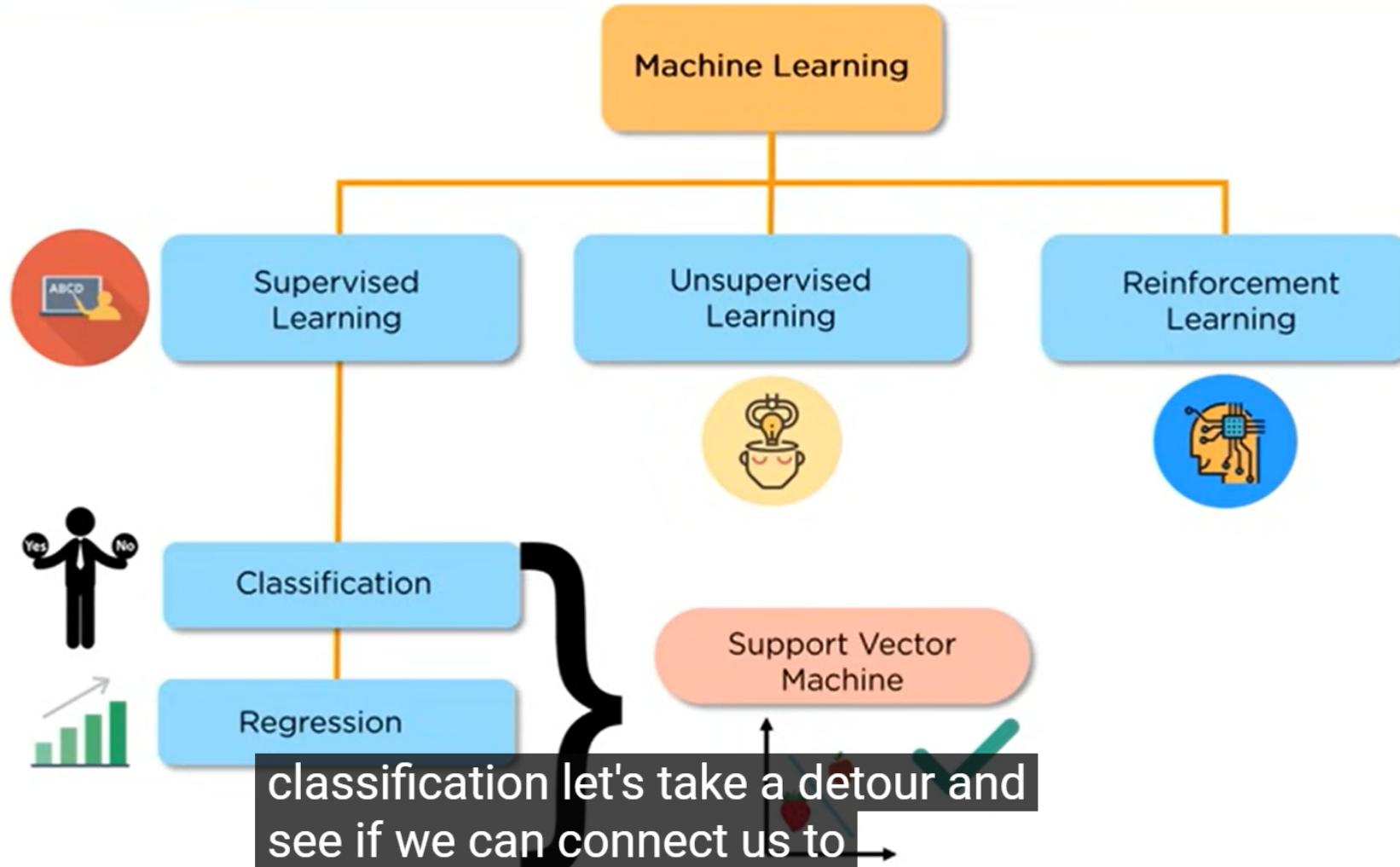


Bioinformatics

# What is Machine learning?

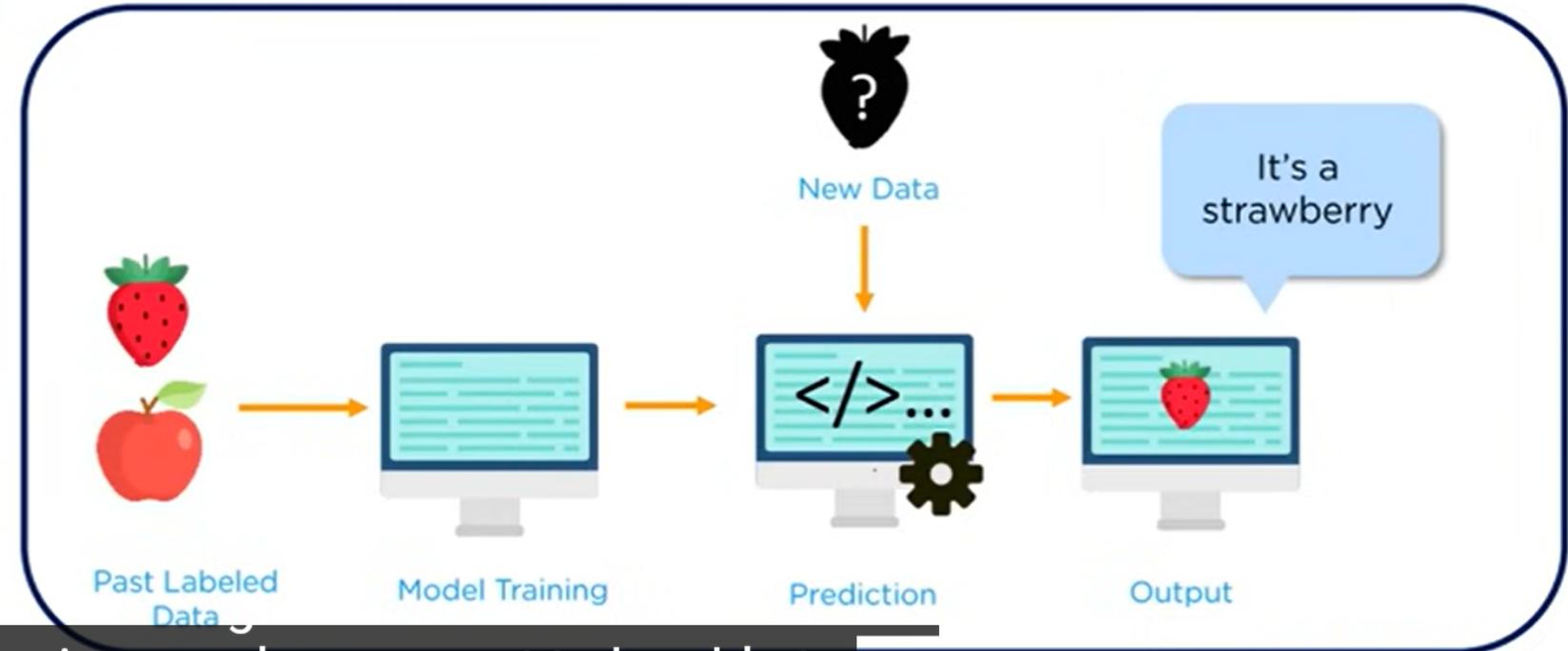


# What is Machine learning?



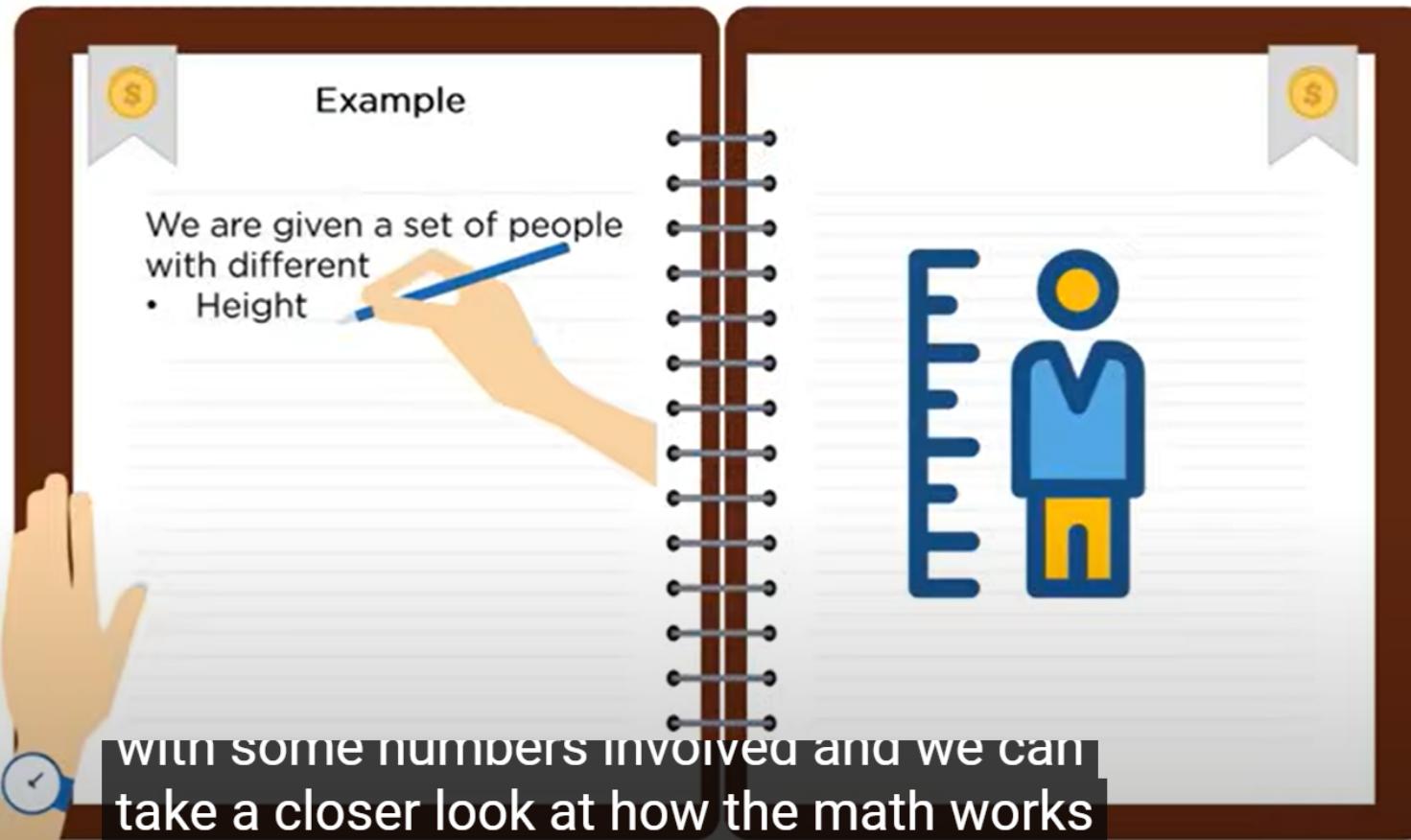
# Why Support Vector Machine?

Why not build a model which can predict an unknown data??



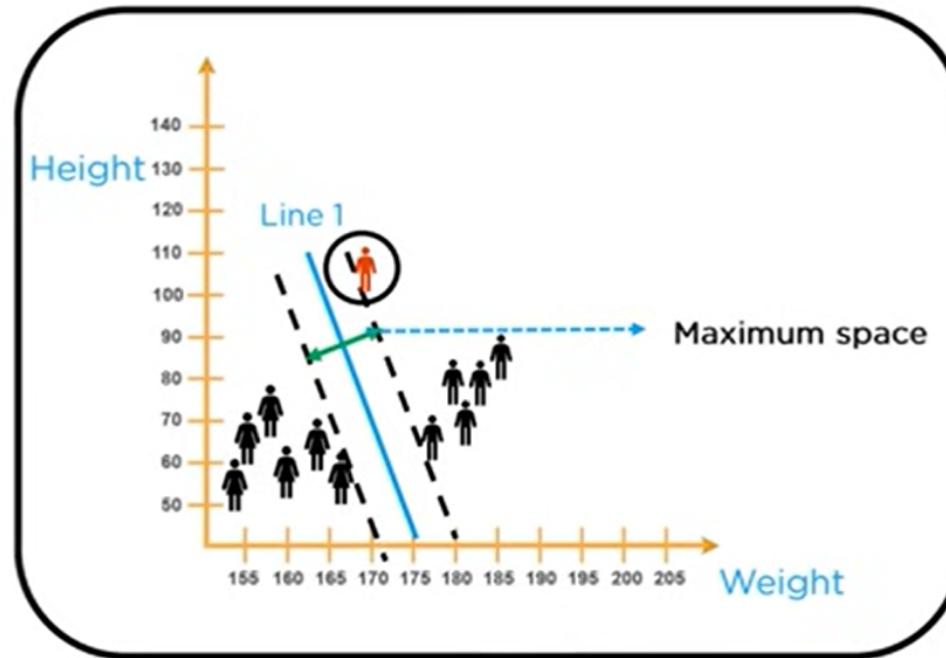
or crispy apples we want to be able to  
label those

# What is Support Vector Machine?



# What is Support Vector Machine?

This line has the maximum space that separates the two classes



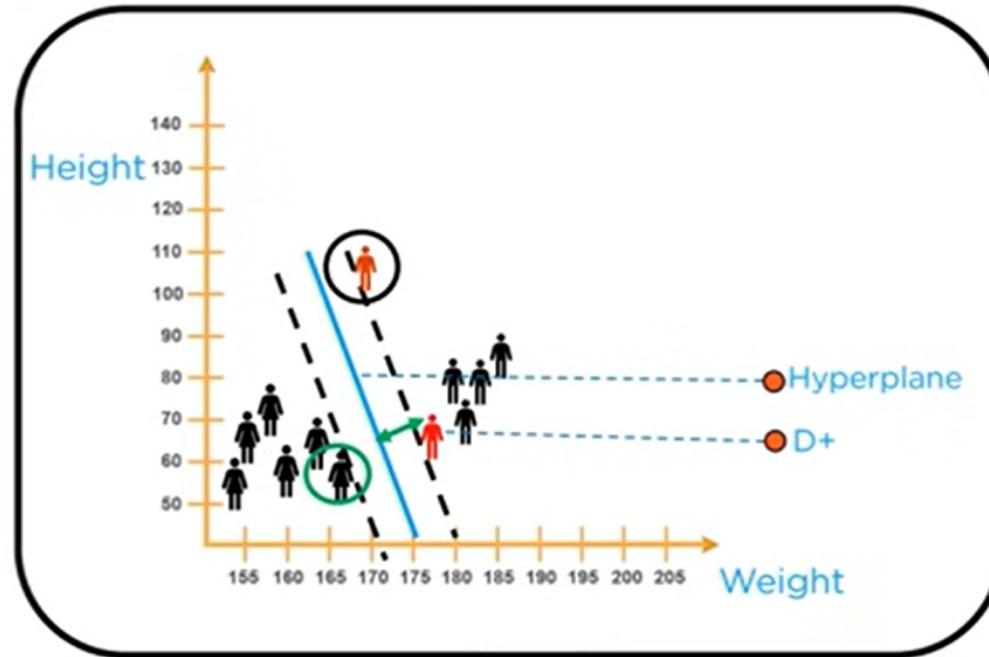
clear split between the two different classes

Why do you say it's the best split??



# What is Support Vector Machine?

Here,  $D_+$  is the shortest distance to the closest positive point

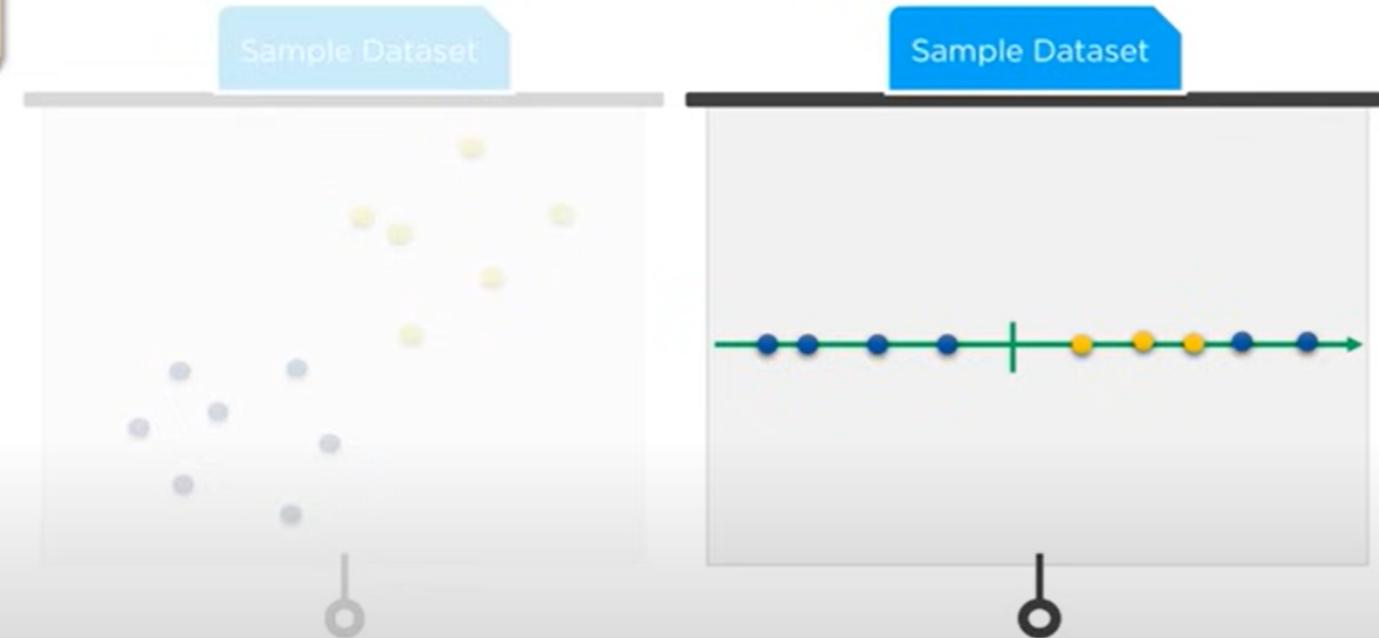


the math behind this is very simple we take  $d$



## Understanding Support Vector Machine

But like this?



yellow and then blue again on the other  
side of our data line in this

# Understanding Support Vector Machine

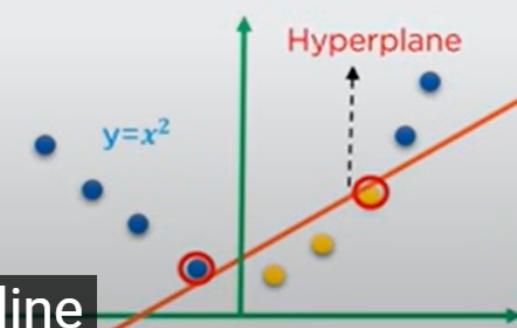
Now, we got the result !!



makes it very easy to draw a line  
between the two data

Transformation

1-D



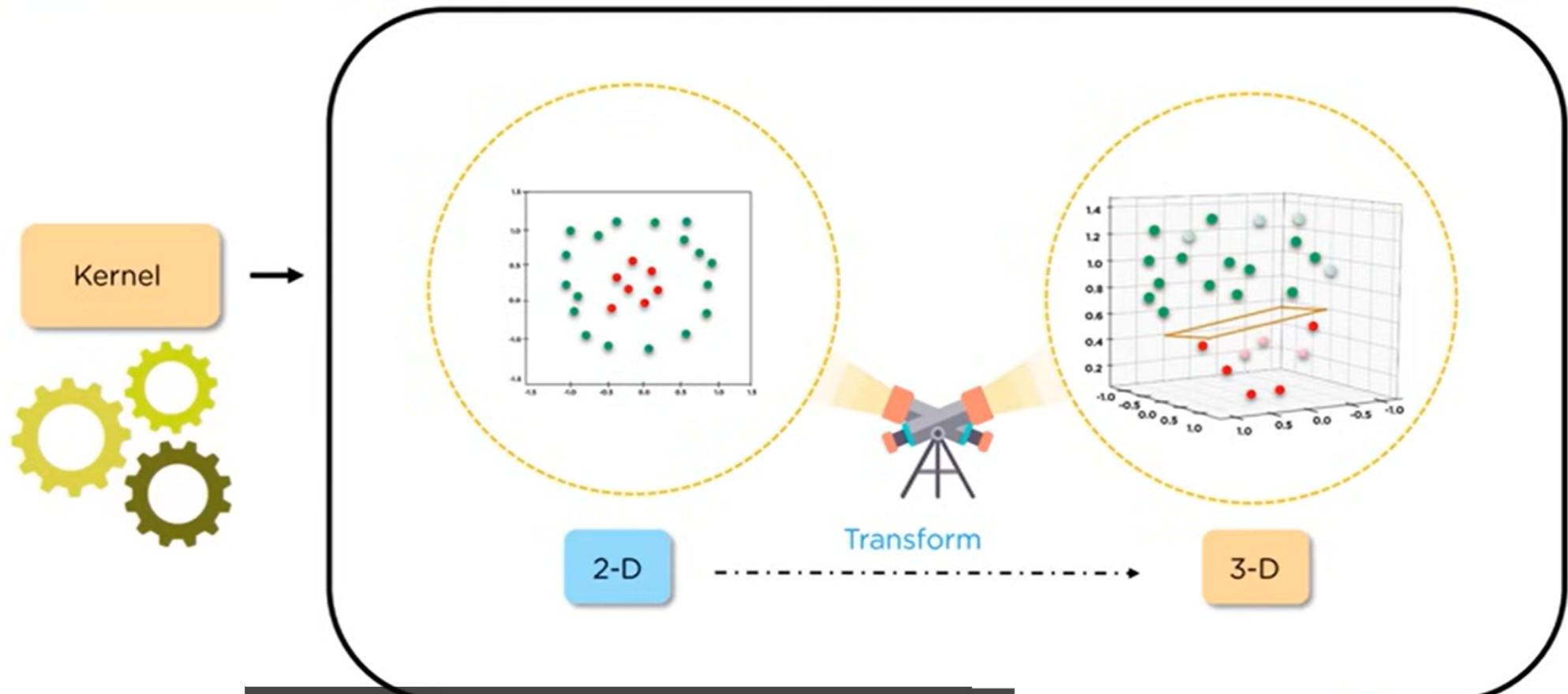
2-D

# Understanding Support Vector Machine



a line through it's obviously not an  
optimal

# Understanding Support Vector Machine



that we need to transfer the 2d to a 3d array and

# Advantages of Support Vector Machine

