PCA:

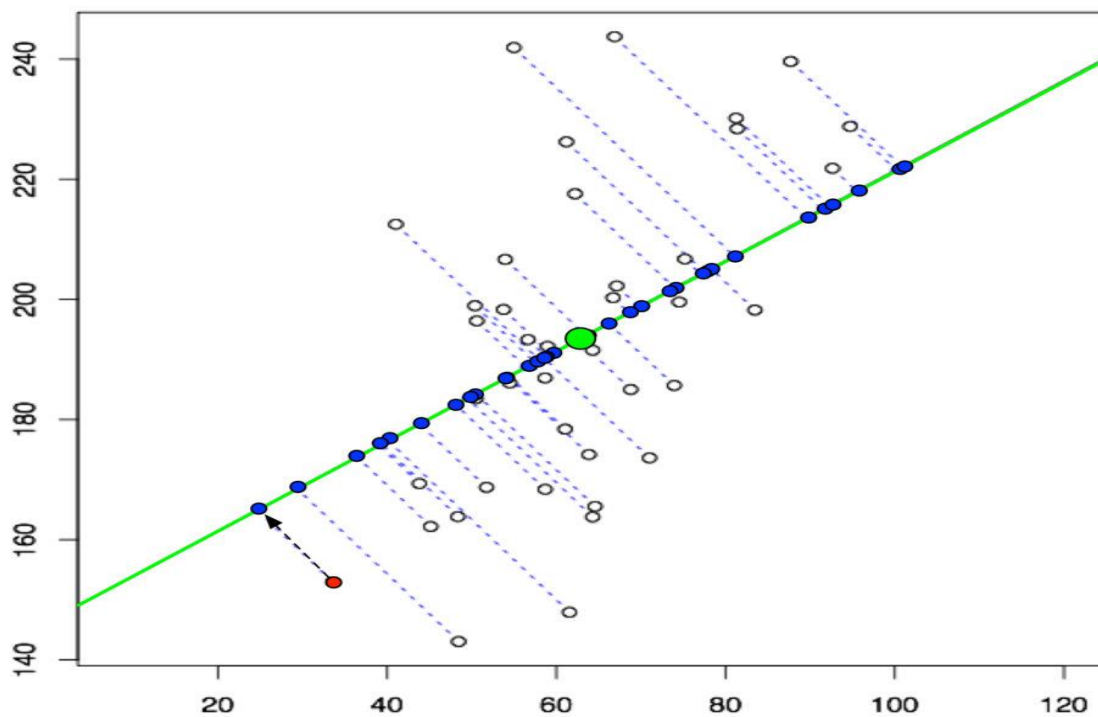If we have more than 3 axis like x,y,z,d ,how we are going to construct them?

It is possible but it will be complicated and it is even impossible to understand if we have more than 5 axis

We can use PCA to solve this problem

-------------->Principle component analysis←----------

What PCA do is plot all data in 2D graph so that you can extract valuable relations between the data

So how its done

Imagine you are taking a photo of some people. You are reducing the dimensionality from 3D (the real world) to a 2D representation. You are losing some explicit 3D information, such as the distance between a person in the front and another person further in the back. However, you will have a pretty decent idea of how far these two persons are apart in reality because the person in the back will appear smaller than the person in the front. So the 3D information is not completely lost but sort of encoded in the 2D image