

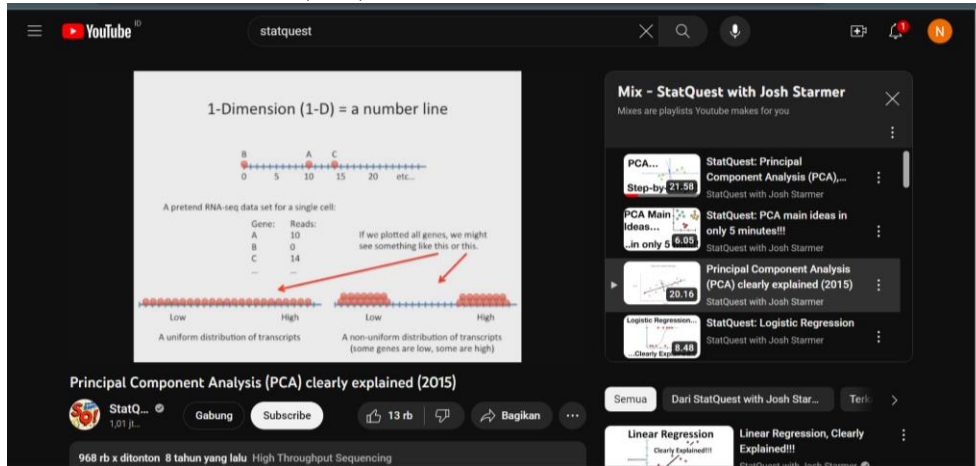
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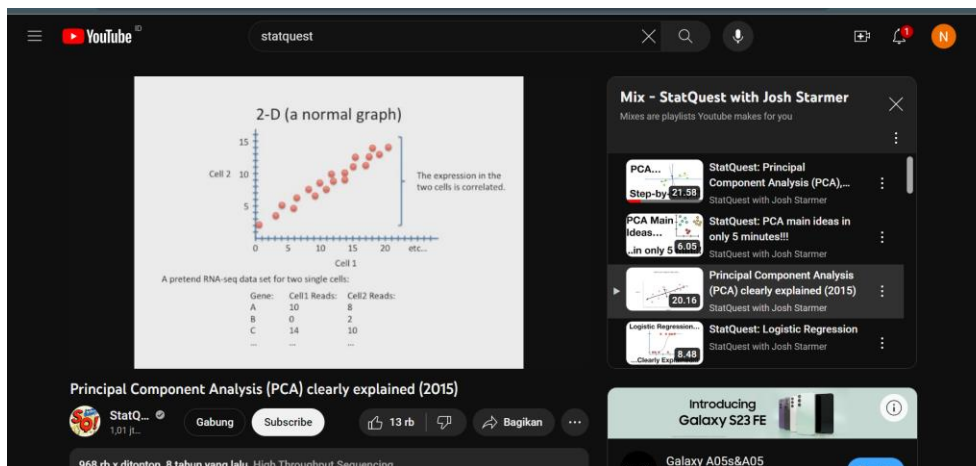
Understanding 3 Link StatQuest (Youtube: Josh Starmer)

1. Principal Component Analysis (PCA) Clearly Explained (2015)

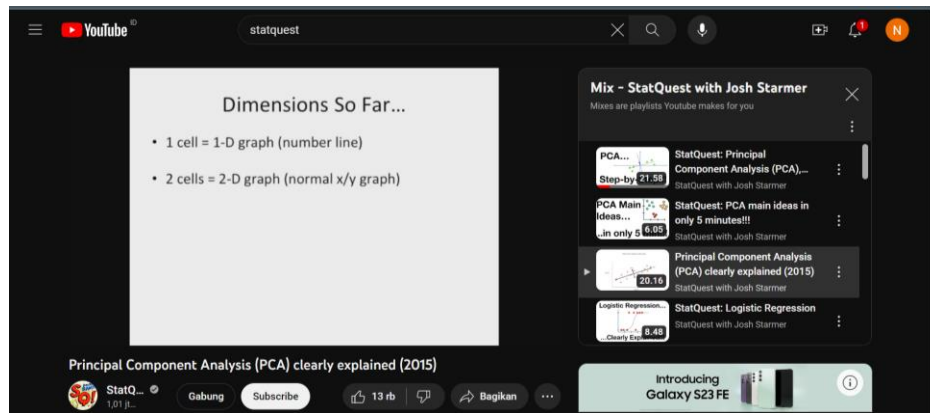
- PCA 1-Dimension (1-D) = a number line



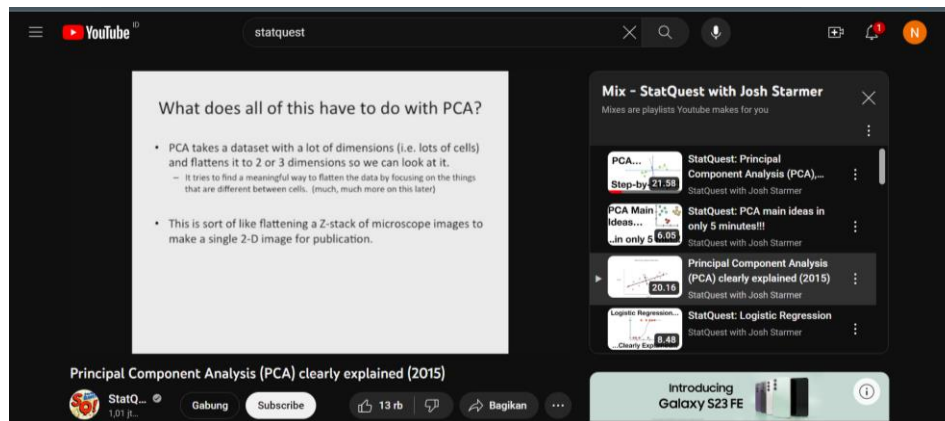
- PCA 2-D



- Dimensi yang diketahui



- What does all of this have to do with PCA ?



- How to identify key genes

The video player shows a YouTube interface with the search term 'statquest'. The video title is 'How to identify key genes.' and the thumbnail displays a PCA plot with various cell types labeled: Blood cells, Placental cells, Dermal or epithelial cells, and Neural cells. The plot shows the distribution of these cell types along the first two principal components (PC1 and PC2). Below the plot, text explains that if we wanted to find out which genes had a big influence in putting dermal cells on the left and neural cells on the right, we could look at the influence scores in PCA.

Below the video player, the video title is 'Principal Component Analysis (PCA) clearly explained (2015)' by StatQuest with Josh Starmer. The video has 1,011 views, 13 likes, and a 'Bagikan' (Share) button. A playlist titled 'Mix - StatQuest with Josh Starmer' is visible on the right, containing videos like 'StatQuest: Principal Component Analysis (PCA) clearly explained (2015)', 'StatQuest: PCA main ideas in only 5 minutes!!', 'StatQuest: Logistic Regression', and 'StatQuest: K-nearest neighbors, Clearly explained'.

2. StatQuest: K-nearest neighbors, Clearly explained

- The K-nearest Neighbors Algorithm

The video player shows a YouTube interface with the search term 'statquest'. The video title is 'The K-Nearest Neighbors Algorithm' and the thumbnail displays a diagram with three boxes labeled 'Stem Cells', 'Blood Vessel Cells', and 'Fat Cells'. Below the boxes, text says 'We could use it to decide which type of cell this guy is...' with a green dot and arrows pointing to the boxes.

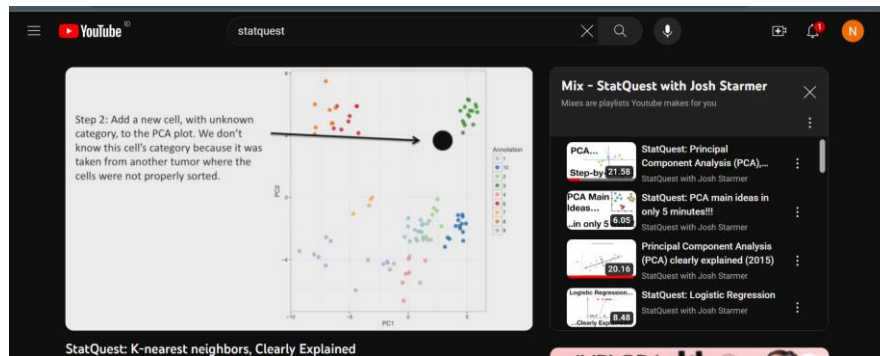
Below the video player, the video title is 'StatQuest: K-nearest neighbors, Clearly Explained' by StatQuest with Josh Starmer. The video has 1,011 views, 9.5 likes, and a 'Bagikan' (Share) button. A playlist titled 'Mix - StatQuest with Josh Starmer' is visible on the right, containing videos like 'StatQuest: Principal Component Analysis (PCA) clearly explained (2015)', 'StatQuest: PCA main ideas in only 5 minutes!!', 'StatQuest: Logistic Regression', and 'StatQuest: K-nearest neighbors, Clearly explained'.

- Star with dataset with known categories

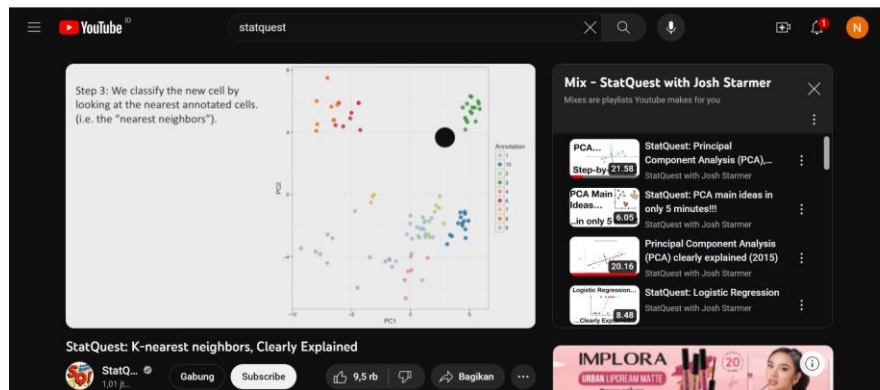
The video player shows a YouTube interface with the search term 'statquest'. The video title is 'Star with dataset with known categories' and the thumbnail displays a scatter plot with various colored dots representing different categories. The plot shows the distribution of these categories along the first two principal components (PC1 and PC2).

Below the video player, the video title is 'StatQuest: K-nearest neighbors, Clearly Explained' by StatQuest with Josh Starmer. The video has 1,011 views, 9.5 likes, and a 'Bagikan' (Share) button. A playlist titled 'Mix - StatQuest with Josh Starmer' is visible on the right, containing videos like 'StatQuest: Principal Component Analysis (PCA) clearly explained (2015)', 'StatQuest: PCA main ideas in only 5 minutes!!', 'StatQuest: Logistic Regression', and 'StatQuest: K-nearest neighbors, Clearly explained'.

- Menambahkan cell baru

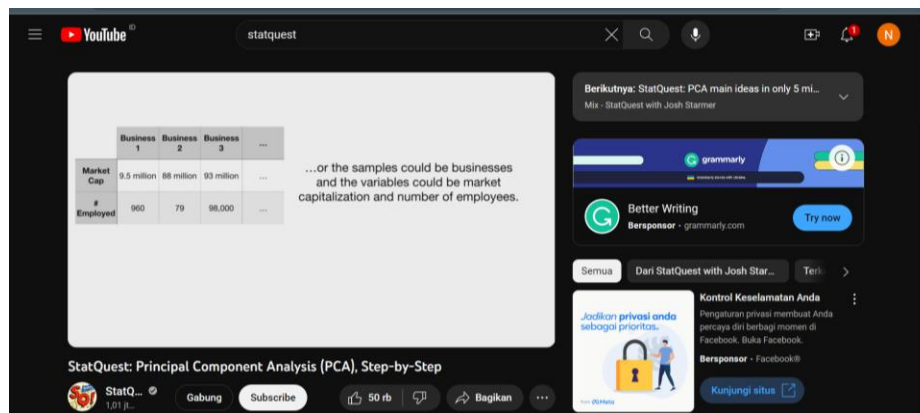


- Klasifikasi cell baru itu dengan cell terdekatnya (neighbors/tetangga)

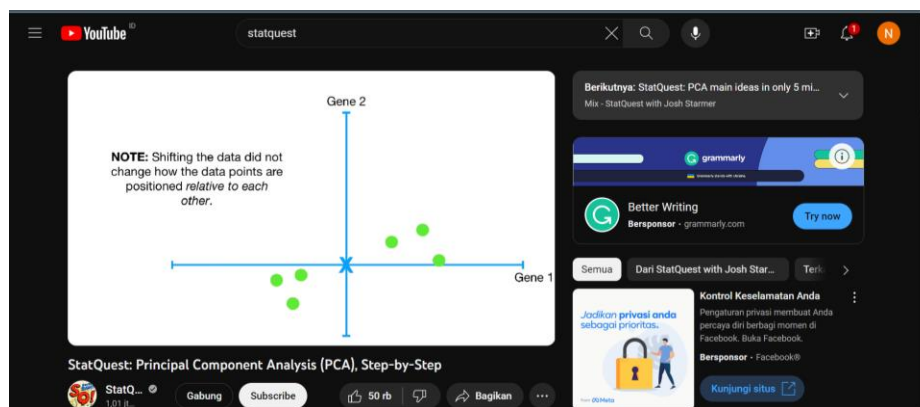


3. Principal Component Analysis (PCA) Step-by-step

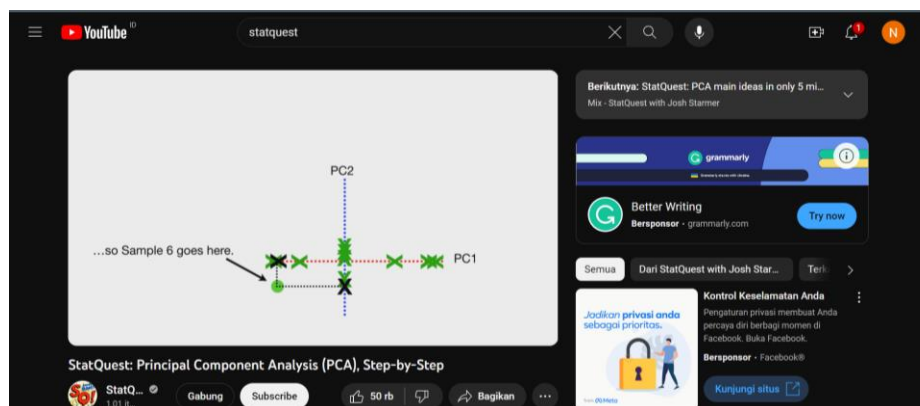
- Conceptual motivation for PCA



- Worked out for 2-dimension data



- Drawing the PCA graph



- PCA worked for 3 dimensional data

