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In-Class Exercise-6:

Answer:

Visualizing the whole student categorical data has 4-5 dimensions and to visualize it requires high-dimensional projections:

The scheme explained here could be implemented by t-SNE scatter plot for higher number of students. And the colour scheme could represent different departments to start the segmentation and easier understanding.

A close up of a flower

Description automatically generated

The figure shown here is the higher dimensionality figure where each coloured cluster here could represent the specific department here in HKUST.

By clicking on the cluster, it zooms in and give us the more courses points in that specific cluster leading to more segmenting and filtering of the data.

Then by clicking on any specific point, there can be two methods to showcase the information of any student in that particular course.

1. By showing a simple box with the picture of the student and his specific information written inside the box.
2. Or by leading to another page where there’s a graph-based distribution where each student picture can act as a node and connected to that specific course. Upon selecting that node, we can check the credentials and the information required. This method seems more efficient as we can see the connection of the students more clearly and be able to correlate the information in a better manner.

A close up of a necklace

Description automatically generated

Figure above shows the connected graphs were the specific colour code could be shown outside the ring and the students being connected with their courses specified. By clicking on the node, we can check their information required.