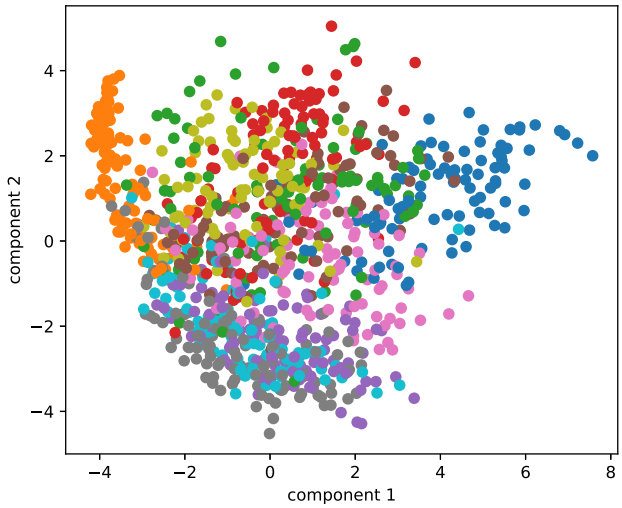
Assignment 2

1. Use PyTorch to perform PCA on the MNIST data to project the data down to two dimensions to create a plot similar to the one shown in the workshop, *i.e.,*



2. Research a second dimension reduction technique (there are possibilities listed in the text) and implement it to generate a similar (in nature) two-dimensional scatter plot.

You can learn how to access and work with the MNIST data in the nearest neighbour exercise from last time. In particular, you might wish to concentrate on creating a $m \times n$ matrix X of the data, where there are m MNIST images, and where $n = k \times \ell$ where the images are k by ℓ pixels in size.