# # Main-Challenge "Reducing the Dimensionality of Data with Neural Networks application"

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## # Challenge 1 - SAS Code to Python

How capable is Gen Ai at converting older code into something a bit more modern?

For this challenge we'll be taking a manual approach and using GitHub Copilot Chat (Powered by GPT-4) to convert an old SAS application into a modern Python Application.

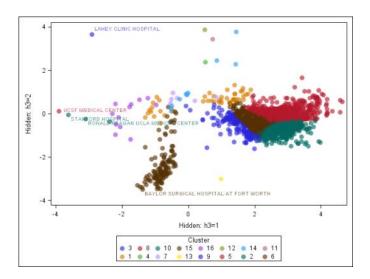
#### Preparation:

> Ensure that the GitHub Copilot and GitHub Copilot Chat extensions are installed from the VS Code Marketplace.

### **Project Overview:**

Verify you have the GitHub Copilot and GitHub Copilot Chat extensions installed. If any of these are missing then install them from the VS Code Marketplace as usual. We're going to be working with this "Reducing the Dimensionality of Data with Neural Networks application"

<a href="https://github.com/sassoftware/enlighten-deep/tree/master/SAS">https://github.com/sassoftware/enlighten-deep/tree/master/SAS</a> Neural Autoencoder program is currently SAS and we want to convert it into a Python Application. The output of the application should look like:



You can choose to either copy the code into a SAS file in your workspace OR simply paste it directly into Copilot Chat. Open GitHub Copilot Chat and attempt to ask GPT-4 to convert the code for you, try playing around with the right prompts for example

#### Examples

> Take this SAS code and convert it into a modern Python Application for me. Save the output to a Python file and verify that it works.

## ## Step 2

Play around with the styling and look and feel of your new application - let's see what GPT-4 can do (create an interface which can take data as input file and display the results