Our submission includes:

Neural_Network_Assignment2.py

- Class component structure code for respective parts
- Attribute vs target variable plots

Report file

- URL to publicly hosted data
- Plots used to visualize data distributions and analyze evaluation metrics
- Trial logs for the code
- Summarization/thoughts on results
- Part 1 and part 2 of the assignment

How to run code:

- Download the Neural_Network_Assignment2.py files
- Open .py in whichever python environment you commonly use
- Ensure that the following packages are installed in your python environment

For each library that is not installed, please run these commands:

- pip install-U scikit-learn
- pip install pandas
- pip install numpy
- pip install matplotlib
- pip install itertools

- If code is not running on mac, please run:
- open /Applications/Python\ 3.11/Install\ Certificates.command

Note: If there's an error that occurs when you try to install itertools, make sure that the program runs. For some reason we get this error but it just goes ahead and install it like nothing happen.

ERROR: Could not find a version that satisfies the requirement itertools (from versions: none)

ERROR: No matching distribution found for itertools

Note: I've attached a file with all the pip installs for your convenience called requirements.txt To install run:

- pip install-r requirements.txt

- Run code as normal
- If using VSCode/Pycharm, the visualizations will open as a popup. To move to the next visual, close the current visualization. The evaluation metrics will be displayed ONLY after all visualizations have been closed.
- **Note: It will not progress unless you click on the x button to close the pop-up window of the visualization graph. Once you close it will proceed to the next combination of parameters.**
- **Note: The program does take a bit of time to run, so let it go through it. My mac can run it in <5 minutes but slower computer might take a bit.**

- Alternatively, you can run the code in Google collab using the links provided in the report file or below. Run the whole file by selecting the Runtime -> Run all.
- **Note: Again, this is not needed but if you wana avoid having to close 23 pop-ups on vscode or pycharm you can use the collab link. This is for your convenience.**
    - **https://colab.research.google.com/drive/1hiD1XW-9XXwSd7Vx2F3iHz_7uM6aECha**