Read Me:

Please do not run the python code if you do not meet the following requirement output of the code may change depending on different system it runs for training and validation.  
To run this AI model code,

Following System requirements:

* CPU Intel i7 or better
* Minimum 32 GB RAM
* Minimum 500 GB SSD storage
* Good performance GPU required for long hour of training model

Software needs to be installed:

* Python 3.10-3.12
* Tensorflo/keras
* Jupyter notebook or google colab
* Pytorch
* Python libraries: Numpy, Wget, scikit-learn, seaborn, matplotlib, pandas, xgboost

Directory:

* Dataset and Code:
  + UNSW\_NB15\_Testing-set and UNSW\_NB15\_Training-set CSV files datasets
  + KDDTest+ and KDDTrain+ - NSL KDD raw dataset
  + Multiclass\_NSL\_KDD\_IDS\_Project – jupyter notebook code for multiclass attack mapping dataset
  + NSL\_KDD\_IDS\_Project – jupyter notebook code for Binary class attack mapping dataset
  + UNSW\_IDS\_Project – jupyter notebook code for binary class attack mapping dataset
* Multiclass\_NSL\_KDD\_IDS\_Project – Output image files from the code
* NSL\_KDD\_IDS\_Project - output image files
* UNSW\_IDS\_Project - output image files