Exercise 10 – Due by October 29th midnight

Exercise 10

Autoencoder:

- A defect detect dataset is provided and it has train and test data as images
- Work out an Autoencoder solution for it and identify the anomalous images in the test data

DBSCAN:

- Develop and detect anomalies in the dataset provided ('equipment_anomaly_dataset.csv')
- This dataset contains simulated data representing real-time monitoring of various industrial equipment, including turbines, compressors, and pumps.
- Each row in the dataset corresponds to a unique observation capturing key parameters such as temperature, pressure, vibration, and humidity. The dataset also includes information about the equipment type, location, and whether the equipment is classified as faulty.
- You may not need all the features in it so judiciously drop the ones you feel are of no value.
- Plot original and after anomaly detection plots (you may need to do PCA to 2-D).