

# Machine Learning

## Winter School of AI & Robotics Problem Statements

### 1. Project I:

a. **PS:** Breast Cancer Classification into Benign and Malignant using the Wisconsin Data Set based on different features such as radius, texture, smoothness, concavity, etc.

b. **Link to Dataset:**

[https://www.kaggle.com/uciml/breast-cancer-wisconsin-data?fbclid=IwAR3oH9f1C1pIVhZ6qGRnHNabhcMVXQjaj\\_-p7axIzfUESOIIQyuvHGacDXY](https://www.kaggle.com/uciml/breast-cancer-wisconsin-data?fbclid=IwAR3oH9f1C1pIVhZ6qGRnHNabhcMVXQjaj_-p7axIzfUESOIIQyuvHGacDXY)

### 2. Project II:

a. **PS:** Clustering of Universities into public and private groups, based on different features, such as accepted students, S/F ratio, out-of-state tuition costs, etc.

b. **Link to Dataset:**

<https://github.com/ChrisWoodard43/KMeans-Universities?fbclid=IwAR0MgYpzLH0buu0iFUtX2zRhaJr5j57NPdg1oyxdzc4GoB-Ay3kIVL-3-M>

### 3. Problem Statement III:

a. **PS:** To classify a given handwritten digit into one of 10 classes representing integer values from 0 to 9 using the MNIST dataset.

b. **Link to Dataset:**

[https://www.kaggle.com/scolianni/mnistasjpg/notebooks?fbclid=IwAR03CIA3v18Pv9lig-Fo99xUJBPaxcYfca8JhsJGq3\\_JkTqkGb\\_OW-MmVc8](https://www.kaggle.com/scolianni/mnistasjpg/notebooks?fbclid=IwAR03CIA3v18Pv9lig-Fo99xUJBPaxcYfca8JhsJGq3_JkTqkGb_OW-MmVc8)