



# Machine learning in Big Data

Dimensionality reduction and classification with a focus on image processing

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## Description

This course will delve into key aspects of dimensionality reduction and classification within the realm of Big Data, with a particular focus on their real-world utility in image processing.

## General topics

1. Introduction to Big Data and Machine Learning (ML)
2. Dimension Reduction Fundamentals
3. Dimension Reduction Methods in Big Data
4. Classification in Machine Learning
5. Introduction to image analysis
6. Specific Applications in Image Processing:
  - a. Image segmentation using ML
  - b. Semantic segmentation
  - c. Image classification

# Recommended textbooks

[1] Morabito, Vincenzo. "Big data and analytics." *Strategic and organisational impacts* (2015). [Link](#) Date: 15-Mar-2024

[2] Dumka, A., Ashok, A., Verma, P., & Verma, P. (2020). *Advanced Digital Image Processing and Its Applications in Big Data* (1st ed.). CRC Press. [Preview Link](#) Date: 15-Mar-2024