Outliers are unusual data points that differ significantly from rest of the samples. They can occur due to an error in data collection process or they are just legitimate data points and represent natural variation. In this video we are going to use percentile to detect and remove outliers from a dataset. We will use python pandas for this.

**Outlier detection and removal :**

Techniques in Outlier detection :

1. Domain Knowledge
2. Visualization
3. Math/Statistics (two standard deviation)

Techniques to remove Outliers are :

1. Percentile
2. Z-score
3. Standard deviation
4. Visualization (Box plot & Scatter plot)
5. IQR

Feature engineering is an important area in the field of machine learning and data analysis. It helps in data cleaning process where data scientists and analysts spend most of their time on. Here are few examples of feature engineering techniques,

1) Outlier detection and removal

2) One hot encoding

3) Log transform

4) Dimensionality reduction using principal component analysis (a.k.a. PCA)

5) Handling missing values

6) Scaling