Description of the Lecture

Unique choice box:

- Introductory course

Title:

- Introduction to Machine Learning and Deep Learning

Short description/abstract:

- This comprehensive course provides a solid foundation in the fields of machine learning and deep learning. It covers essential concepts, algorithms, and techniques used to develop intelligent systems capable of learning from data. Participants will delve into the principles of supervised and unsupervised learning, feature engineering, model evaluation, and optimization. Additionally, the course explores the exciting realm of deep learning, focusing on neural networks, and their applications in image recognition, natural language processing, and more.

Contents:

- Introduction to Supervised and Unsupervised Learning
- Linear Regression
- Classification
- Linear Model Selection and Regularization
- Neural Networks

Number of sessions: 6 (1 hour per session > Total : 6 Hours).

o Domain from Arxiv: Statistics (Machine Learning) & Computer Science (Artificial Intelligence & Machine Learning)

o MSC 2020: 68Txx (Artificial Intelligence) & 62Hxx (Multivariate Analysis)

o Keywords: Machine Learning # Deep Learning

Bibliography:

- T. Hastie, R. Tibshirani, J. Friedman, The Elements of Statistical Learning: Data Mining, Inference, and Prediction. 2nd edition, Springer Series in Statistics, 2009
- G. James, D. Witten, T. Hastie, R. Tibshirani, An Introduction to Statistical Learning with Applications in Python. Springer Series in Statistics, 2023
- M.P. Deisenroth, A. Aldo faisal, C.S. Ong, Mathematics for Machine Learning. Cambridge University Press, 2021
- A. Géron, Hands-On Machine learning with Scikit-Learn & Tensorflow: Concepts, Tools, and Techniques to Build Intelligent Systems. O'Reilly Press, 2017