**TLCE**
TEACHING LEARNING CENTER OF EXCELLENCE
VIT, VELLORE
உழைப்பே உயர்வு தரும்

**Faculty Development Program**

**VIT®**
**Vellore Institute of Technology**
(Deemed to be University under section 3 of UGC Act, 1956)

**Title :** Foundations of Machine Learning

**Date :** 18-Dec-2023 - 22-Dec-2023
**Time :** 10:00 - 17:30
**Venue :** SJTG07

## Discussion Points

- Introduction and Regression Techniques - Supervised Classification Techniques
- supervised classification techniques
- Hands on session for Machine learning classifiers using Python Scikit learn
- Neural Networks, Introduction to Neural Networks and Multi-layer Perceptron
- Unsupervised Learning,Introduction to Clustering Techniques
- Hands on session for clustering and dimensionality reduction
- Reinforcement Learning

**Resource Person 1 - Details**
**Name :** Selva Rani B
**Designation :** Associate Professor Grade 2, School of Computer Science Engineering and Information Systems
**University/ Company :** VIT, Vellore
**Address :** India, 632014.

**Resource Person 2 - Details**
**Name :** Ramkumar T
**Designation :** Professor Grade 1, School of Computer Science Engineering and Information Systems
**University/ Company :** VIT, Vellore
**Address :** India, 632014.

**Resource Person 3 - Details**
**Name :** Arun Pandian J
**Designation :** Assistant Professor Sr. Grade 1, School of Computer Science Engineering and Information Systems
**University/ Company :** VIT, Vellore
**Address :** India, 632014.

**Resource Person 4 - Details**
**Name :** Durai Raj Vincent P.m
**Designation :** Professor Grade 1, School of Computer Science Engineering and Information Systems
**University/ Company :** VIT, Vellore
**Address :** India, 632014.

**Resource Person's Profile :**

### 1. Profile of Selva Rani B

Prof. Selva Rani is a member of Department of Information Technology, VIT, Vellore, India. She holds M.E. Degree Computer Science from Anna University, India. Her current research interests are Cryptography, Homomorphic Encryption, Collective Intelligence and Artificial Intelligence.

### 2. Profile of Ramkumar T

Dr.T.Ramkumar is presently working as a Professor in the School of Computer Science Engineering and Information Systems, VIT, Vellore. He obtained Ph.D degree from Anna University, Chennai in the year 2010. He has functioned as a resource person in more than 20 Faculty Development Programmes and organized various seminars and workshops which are funded by ISTE, AICTE , and others. He has successfully guided three research scholars to their Ph. D degree. His current research interests include d

### 3. Profile of Arun Pandian J

Dr. ARUN PANDIAN J received his Ph.D. from Anna University, Chennai, India, in 2021. His research interests include deep learning, image processing and natural language processing. Currently, he is an assistant professor in the School of Computer Science Engineering and Information Systems, Vellore Institute of Technology, Vellore, India. He has seven years of teaching experience. Also, he received various industry certifications, such as "Nvidia Deep Learning Institute Ambassador" and GitHub C

### 4. Profile of Durai Raj Vincent P.m

P.M. Durai Raj Vincent, received his B.E. and M.E. from Anna University, Chennai, India. He also received his Ph.D., from VIT University Vellore in 2015. He is presently working as a Professor in the School of Computer Science Engineering and Information Systems at Vellore Institute of Technology (VIT), India. He is having more than 16 years of teaching and research experience.

Machine learning (ML) is the scientific study of algorithms and statistical models that computer systems use to perform a specific task without using explicit instructions, relying on patterns and inference instead. The purpose of machine learning is to discover patterns in the data and then make predictions based on often complex patterns to answer business questions, detect and analyze trends, and help solve problems. Machine learning is effectively a method of data analysis that works by automating the process of building data models. This FDP will cover the fundamental principles and techniques in machine learning techniques via theoretical aspects and hands-on experiments.

Python language with scikit-learn, tensorflow, matplotlib, open ai gym and rlglue
IBM SPSS and Microsoft Excel

**Coordinator's:** **Prof. VANITHA M 10908 - Associate Professor Sr. - SCORE**
**Prof. PARIMALA M 11943 - Associate Professor Sr. - SCORE**