Machine Learning

COURSE INTRO

4th Sem, DSE (A)

Dept. of Data Science & Computer Applications

COURSE DETAILS

Subject Code:	DSE 2254
Credit:	4
Lecture Hours:	48
~~Lab/Tutorial Hours:~~	~~0~~
Contacts hours per week:	04
No. of Contact Weeks:	12
Self Study Hours:	72
Teaching Staff:	**SSS Shameem**

Assistant Professor, Dept. of Data Science & Computer Applications, MIT

LECTURER INFO

SSS Shameem

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Current

Assistant Professor **(2021 onwards)**

Dept. of Data Science & Computer Applications (DSCA),
Manipal Institute of Technology (MIT),
Manipal Academy of Higher Education (MAHE), INDIA.

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Earlier

Assistant Professor **(2017 – 2021)**

Dept. of Computer Engineering & Computer Sciences,
School of Science & Engineering (SoSE),
Manipal International University (MIU), Malaysia.

Assistant Professor **(2011 - 2017)**

Dept. of Computer Applications,
Manipal Institute of Technology (MIT),
MAHE, INDIA.

Assistant Software Developer **(2011)**

Huawei Technologies Pvt. Ltd.,
Bangalore, INDIA.

Area of Expertise: **Data Science, Artificial Intelligence, Big Data, Cloud Computing, Software Testing, S/W Engineering & Programming Languages.**

COURSE OBJECTIVES

At end of this course, Student should be able to:

- Understand the basic concepts in Predictive Analytics,
- Understand the working of various Supervised Machine Learning Techniques,
- Understand the working of various unsupervised Machine Learning Techniques,
- Perform attribute relevance analysis and model specific fitting for various predictive models,
- Perform dimensionality reduction and clustering on data,
- Apply predictive models for various applications.

COURSE CONTENT

- Introduction to Machine Learning,
- Regression, Classification, & Clustering,
- Data Preparation & Enhancement,
- Evaluation & Analysis,
- Introduction to deep learning.

COURSE REFERENCES

- *Kevin P. Murphy,* **Machine Learning: A Probabilistic Perspective**, **MIT Press, 2012**.
- *Ethem Alpaydin,* **Introduction to Machine Learning**, 3rd Edition, **PHI Learning Private Limited, 2018.**
- *Mehryar Mohri, Afshin Rostamizadeh, and Ameet Talwalkar,* "**Foundations of Machine Learning**, **MIT Press, 2012**
- *Christopher M. Bishop*, **Pattern Recognition and Machine Learning**, **Springer, 2007**
- *Glenn J. Myatt, W. P. Johnson,* **Making Sense of Data I: A Practical Guide to Exploratory Data Analysis and Data Mining,** 2nd Edition, **Wiley Publication,** 2014.
- *Glenn J. Myatt, W. P. Johnson,* **Making Sense of Data II: A Practical Guide to Data Visualization, Advanced Data Mining Methods & Applications, Wiley,** 2009.
- *Pang-Ning Tan, Michael Steinbach, Vipin Kumar,* **Introduction to Data Mining, Pearson Education,** 2nd Edition.
- *Jiawei Han and Micheline Kamber,* **Data Mining Concepts And Techniques,** 3rd Edition, **Morgan Kauffmann.**
- *Galit Shmueli, Nitin R. Patel, and Peter C. Bruce,* **Data Mining for Business Intelligence, John Wiley and Sons,** 2014.
- *Ian H. Witten, Eibe Frank, Mark A. Hall,* **Data Mining: Practical Machine Learning Tools and Techniques, Morgan Kaufmann,** 2011.

COURSEWORK (TENTATIVE)

Coursework Components	Total Marks
Mid Term Test (2 x 15)	30
Assignments (4 x 5)	20
LAB	-
End Sem Exam	50
Total	100

LET'S START