



## Master of Computer Applications

### Report On Value Added Course: Certificate Course in Machine Learning

#### ACTIVITY :Value Added Course

**Title :**Certificate Course in Machine Learning

**Values:** Domain Knowledge; Modern Tool Usage; Professional Ethical Edification

**Organized by :** Department of Computer Applications

**Program Theme :**Certificate course in Machine Learning

**Objective:** The purpose of this course is to make students aware of machine learning concepts, so that they may become able to create applications based on machine learning. The main objective is to enable the students with the basic knowledge on the techniques to build an intellectual machine for making decisions on behalf of humans. This course covers the techniques on how to make learning by a model, how it can be evaluated, what are different algorithms to construct a learning model.

**Internal Expert :**Ms. Ambooj

**Resource Person Profile:** Ms. Ambooj, has done BCA and M.Tech in Computer Science. She has 2 years of Teaching experience. Her expertise is on Java, DBMS and Machine Learning.

**Date** : 11-02-2019 – 27-03-2019

**Time** : 02:00 PM – 03:00 PM

**Venue** : Offline, Room No. 2203



**Master of Computer Applications (MCA)**

**VALUE ADDED COURSE**

**Session-2018-19**

**CERTIFICATE COURSE IN MACHINE LEARNING**



**About the course**

Value Added Courses are designed to raise students' level above and beyond the academic curriculum; Envisage Modern Tool Usage, Learners to upgrade their skillsets; Bridging the gap between academia and corporate requirements; Certificate Course in Machine Learning will be able to attain as under:

- Broadening of Domain Knowledge
- Apply techniques of appropriate software's validation
- Acquire technical skills to lead as productive IT Professional
- Enhancing Employability

**Learning Outcomes**

At the end of this Course, student will be able to :

- Understand the fundamental concepts of machine learning
- Utilize supervised, unsupervised and reinforcement learning
- Understand deep learning and neural networks

**Note**

- Batches will commence w.e.f 11.02.2019 from 02:00 PM to 03:00 PM.
- Each batch shall comprise of 60 students only.
- Minimum 75% attendance is required by the candidate for assessment.
- Assessment will be made on the basis of Viva-voce and Written/Practical Exam
- Successful learners after assessment will get the certificate of the VAC

**Duration : 30 hours**

**Timing : 02:00 PM - 03:00 PM**

**Resource person:**

**Ms. Ambooj**

**Registration Date :**

**28.01.2019 – 05.02.2019**

**VAC Contents**

- Introduction to Machine Learning (1 Hr)
- Data Preprocessing and Exploration (2 Hrs)
- Supervised Learning Algorithms (3Hrs)
- Unsupervised Learning Algorithms (3Hrs)
- Feature Engineering (3 Hrs)
- Model Evaluation and Validation (3 Hrs)
- Evaluation and Validation of Machine Learning Models (4 Hrs)
- Deep Learning and Neural Networks (4 Hrs)
- Reinforcement Learning (3 Hrs)
- Practical Implementations and Projects (4 Hrs)

For any queries related the VAC certification course, Please feel free to contact


**VAC Coordinator : Ms. Sania (Email: sssaniasachdeva@gmail.com)**

**Social media link** (promoting in any one Facebook/Instagram/Twitter is mandatory)

<https://www.instagram.com/tecniaofficial?igsh=MXdxdzZwb2EwaWszNg==>

**No. of Students\*** (only no. to be written, list in excel or word should be maintain at department level as proof for any further requirement)

33

<b>No. of Faculty*</b> <i>(only no. to be written , list in excel or word should be maintain at department level as proof for any further requirement)</i>	01
<b>No. of External Participants (students + faculty)</b> <i>[write NA if not applicable]</i>	NA
<b>(Geotag) Photograph*</b>	
<p style="text-align: center;">Photograph of the Event with the Caption</p>	
<p><b>Report: Description in (min 250 to max 800 words)*</b></p>	<p>Machine learning is a subset of artificial intelligence (AI) that focuses on the development of algorithms and models that enable computers to learn from data and make predictions or decisions without being explicitly programmed. It encompasses a wide range of techniques and approaches that enable computers to automatically learn from data and improve their performance over time.</p> <p>The course started with the introduction of Machine Learning and the resource person, Ms. Ambooj made the students aware of the concepts of Machine Learning, its application and significance in the field of Information Technology.</p> <p>The students learnt Machine learning algorithms required data to learn from. This data may include features (attributes) and labels (target variables) for supervised learning tasks, or just features for unsupervised learning tasks. Also learnt the model iteratively adjusts its parameters to minimize the difference between its predictions and the actual values in the training data.</p> <p>They learnt how to prepare model is trained, it needs to be evaluated to assess its performance</p>

	<p>and generalization capabilities. After the model is trained and evaluated, it can be used to make predictions or infer patterns in new, unseen data. This is the deployment phase where the model is put into production to perform tasks such as classification, regression, clustering, or recommendation.</p> <p>Furthermore, they were taught Machine learning has a wide range of applications across various domains.</p> <p>The students were also given Hands-on training on the systems. Finally, the students were assessed on the basis of Quiz , Practical and Viva voce and were given certificates based on their evaluation.</p>
<b>Learning Outcomes</b>	<p>The Learning Outcomes of the Value Added Course are as under:</p> <ul style="list-style-type: none"> <li>• Understanding of Machine Learning Concepts</li> <li>• Proficiency in Data Preprocessing and Feature Engineering</li> <li>• Model Selection and Evaluation</li> <li>• Feature Selection and Dimensionality Reduction</li> <li>• Model Deployment</li> </ul>
<b>Attendance Sheet*</b>	<i>Attached at the end of Report</i>
<b>Feedback</b>	<i>Sample feedback Attached at the end of Report</i>
<b>Report Submitted by Convener (write faculty coordinator name)</b>	Ms. Sania
<b>For Office Use</b>	
<p style="text-align: center;"><i>Sania</i></p> <p><b>Signature of VAC Coordinator</b></p>	<p style="text-align: center;"><i>Vishal</i></p> <p style="text-align: center;">HoD MCA-TIAS</p> <p><b>Signature of School/ Department Head (with Seal)</b></p>