

# KLS Vishwanathrao Deshpande Institute of Technology



(Accredited by NAAC with "A" Grade)  
(Approved by AICTE, New Delhi, Affiliated to VTU, Belagavi)  
(Recognized Under Section 2(f) by UGC, New Delhi)  
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## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### Add-on Course Syllabus

#### Title: Python & Applications in AI

Semester: 6<sup>th</sup>

Total Number of Lecture Hours: 30Hrs

AY:2024-25 (EVEN)

Modules	RBT Level
<b>Module-1</b>	
<b>Python Programming with AWS:</b> Python Programming Fundamentals, Cloud Computing Concepts & AWS Basics, Using Python to Interact with AWS, Automation and Scripting with Python on AWS, Deploying Python Applications on AWS	L1,L2
<b>Module-2</b>	
<b>AI with Python:</b> Introduction to AI, Python for AI Development, Data Preprocessing and Analysis, Data Preparation and Feature Engineering, Core Machine Learning (ML) Algorithms: Supervised Learning Algorithms, Unsupervised Learning Algorithms, Reinforcement Learning Algorithms,	L1,L2
<b>Module-3</b>	
<b>Deep Learning Tutorial:</b> Introduction to Deep Learning, Math Foundations for Deep Learning, Deep Learning Tools & Frameworks	L1,L2
<b>Module-4</b>	
<b>AI with Python Deep Learning Neural Networks:</b> Basic Neural Networks, Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs) and LSTMs, Deep Learning Workflow	L1,L2
<b>Module-5</b>	
<b>Practical Python for AI Coding:</b> Essential Python Libraries for AI: NumPy, Pandas, SciPy, Python for Computer Vision, Python coding and examples	L1,L2

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