



## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING - DATA SCIENCE

### Lesson Plan & Work-done Diary for AY: 2025-26, Even Semester

| Course with Code: Artificial Intelligence and Machine Learning -BDS602 |                      |   | Faculty: Dr. Neethi M V |           |                            |                | Semester & Section: VI |                          |
|--|----------------------|---|-------------------------|-----------|----------------------------|----------------|------------------------|--------------------------|
| Class No.  | Date planned (DD/MM) | Topics to be covered  | TLP Planned             | Class No. | Date of Conduction (DD/MM) | Topics Covered | TLP Executed           | Remarks if any deviation |
| <b>MODULE-1</b>  |                      |   |                         |           |                            |                |                        |                          |
| 1.   | 10/2/25              | <b>Introduction to the course</b><br><b>Introduction:</b> What is AI? | PPT                     | 1         |                            |                |                        |                          |
| 2.   | 11/2/25              | Foundations and History of AI   | PPT                     | 2         |                            |                |                        |                          |
| 3.   | 13/2/25              | <b>Intelligent Agents:</b> Agents and environment,                    | PPT                     | 3         |                            |                |                        |                          |
| 4.   | 14/2/25              | Agents and environment, .   | PPT                     | 4         |                            |                |                        |                          |
| 5.   | 17/2/25              | . Concept of Rationality  | PPT                     | 5         |                            |                |                        |                          |
| 6.   | 18/2/25              | The nature of environment, The structure of agents                    | PPT                     | 6         |                            |                |                        |                          |
| 7.   | 20/2/25              | Revision, Module End Question discussion, Quiz                        | PPT                     | 7         |                            |                |                        |                          |



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| <b>MODULE-2</b>  |                      |  |             |                         |                            |                |              |                          |  |
| 1.   | 21/2/25              | Problem-solving: Problem-solving agents,             | PPT         | 1                       |                            |                |              |                          |  |
| 2.   | 24/2/25              | Example problems,                                    | PPT         | 2                       |                            |                |              |                          |  |
| 3.   | 25/2/25              | Searching for Solutions Uninformed Search Strategies | PPT         | 2                       |                            |                |              |                          |  |
| 4.   | 27/2/25              | Searching for Solutions Uninformed Search Strategies | PPT         | 4                       |                            |                |              |                          |  |
| 5.   | 28/2/25              | : Breadth First search,                              | PPT         | 5                       |                            |                |              |                          |  |
| 6.   | 03/3/25              | Depth First Search                                   | PPT         | 6                       |                            |                |              |                          |  |
| 7.   | 04/3/25              | Depth First Search                                   | PPT         | 7                       |                            |                |              |                          |  |
| 8.   | 06/3/25              | Iterative deepening depth first search;              | PPT         | 8                       |                            |                |              |                          |  |
| 9.   | 07/3/25              | Heuristic functions                                  | PPT         | 9                       |                            |                |              |                          |  |



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| <b>MODULE-3</b>  |                      |   |                         |           |                            |                |                        |                          |
| 1.   | 10/3/25              | Introduction to machine learning: Need for Machine Learning,                  | PPT                     | 1         |                            |                |                        |                          |
| 2.   | 11/3/25              | Machine Learning Explained, and Machine Learning in relation to other fields, | PPT                     | 2         |                            |                |                        |                          |
| 3.   | 13/3/25              | Types of Machine Learning. Challenges of Machine Learning,                    | PPT                     | 3         |                            |                |                        |                          |
| 4.   | 14/3/25              | Machine Learning process,   | PPT                     | 4         |                            |                |                        |                          |
| 5.   | 17/3/25              | Machine Learning applications.  | PPT                     | 5         |                            |                |                        |                          |
| 6.   | 18/3/25              | Understanding Data: What is data, types of data,                              | PPT                     | 6         |                            |                |                        |                          |
| 7.   | 24/3/25              | Big data analytics and types of analytics, Big data analytics framework,      | PPT                     | 7         |                            |                |                        |                          |
| 8.   | 25/3/25              | Descriptive statistics, univariate data analysis and visualization            | PPT                     | 8         |                            |                |                        |                          |



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| <b>MODULE-4</b>  |                      |  |                         |           |                            |                |                        |                          |
| 1.   | 27/3/25              | Understanding Data Bivariate and Multivariate data,                              | PPT                     | 1         |                            |                |                        |                          |
| 2.   | 28/3/25              | Multivariate statistics , Essential mathematics for Multivariate data,           | PPT                     | 2         |                            |                |                        |                          |
| 3.   | 01/04/25             | Overview hypothesis, Feature engineering and dimensionality reduction techniques | PPT                     | 3         |                            |                |                        |                          |
| 4.   | 03/04/25             | Basics of Learning Theory: Introduction to learning and its types,               | PPT                     | 4         |                            |                |                        |                          |
| 5.   | 04/04/25             | Introduction computation learning theory   | PPT                     | 5         |                            |                |                        |                          |
| 6.   | 07/04/25             | Design of learning system, Introduction  | PPT                     | 6         |                            |                |                        |                          |
| 7.   | 08/04/25             | concept learning. Similarity-based learning:                                     | PPT                     | 7         |                            |                |                        |                          |
| 8  | 11/04/25             | Introduction to Similarity or instance based learning,                           | PPT                     | 8         |                            |                |                        |                          |
| 9  | 15/04/25             | Nearest- neighbour learning, weighted k- Nearest - Neighbour algorithm           | PPT                     | 9         |                            |                |                        |                          |



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| <b>MODULE-5</b>  |                      |  |                         |           |                            |                |                        |                          |
| 1.   | 25/4/25              | Artificial Neural Network: Introduction, | PPT                     | 1         |                            |                |                        |                          |
| 2.   | 29/4/25              | Biological neurons, Artificial neurons,  | PPT                     | 2         |                            |                |                        |                          |
| 3.   | 02/5/25              | Perceptron and learning theory,          | PPT                     | 3         |                            |                |                        |                          |
| 4.   | 05/5/25              | types of Artificial neural Network,      | PPT                     | 4         |                            |                |                        |                          |
| 5.   | 06/5/25              | learning in multilayer Perceptron,       | PPT                     | 5         |                            |                |                        |                          |
| 6.   | 08/5/25              | Radial basis function neural network,    | PPT                     | 6         |                            |                |                        |                          |
| 7.   | 09/5/25              | Radial basis function neural network,    | PPT                     | 7         |                            |                |                        |                          |
| 8.   | 12/5/25              | self-organizing feature map,             | PPT                     | 8         |                            |                |                        |                          |
| 9.   | 15/5/25              | self-organizing feature map,             | PPT                     |           |                            |                |                        |                          |



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|                           | Activity   | Planned                   | Actual | Remarks |
|---------------------------|--|---------------------------|--------|---------|
| 1                         | Theory Classes                                   | 40                        |        |         |
| 2                         | Assignments/<br>Quizzes/Self-study               | 3                         |        |         |
| 3                         | Tutorials/ Extra classes                         | 1                         |        |         |
| 4                         | Internal Assessments                             | 3                         |        |         |
| 5                         | ICT based Teaching<br>(% of usage in Curriculum) | 100                       |        |         |
| <b>Planning</b>           |  | <b>Execution</b>          |        |         |
| <b>Faculty Signature:</b> |  | <b>Faculty Signature:</b> |        |         |
| <b>HoD Signature:</b>     |  | <b>HoD Signature:</b>     |        |         |



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