



**Course Outcomes & CO-PO-PSO Mapping and Justification**

Subject	Machine Learning	17CS73
<b>COURSE OUTCOMES:</b>		
CO No.	On completion of this course, students will be able to:	Cognitive Level
17CS73.1	Understand machine learning, concept learning, Inductive bias, find-s and candidate elimination algorithms.	L3
17CS73.2	Understand decision tree learning algorithm.	L3
17CS73.3	Apply neural networks for problems appear in machine learning using Perceptron's, Back propagation algorithm.	L3
17CS73.4	Apply Bayesian Learning using Bayes theorem, Naïve Bayes classifier and EM algorithm.	L3
17CS73.5	Evaluating Hypothesis using Instance Based Learning methods	L3

**CO-PO-PSO MAPPING**

CO No.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
17CS73.1	2	2	1	-	-	-	-	-	-	-	-	2	2	-	-
17CS73.2	2	2	1	-	-	-	-	-	-	-	-	2	2	-	-
17CS73.3	2	2	1	-	-	-	-	-	-	-	-	2	2	-	-
17CS73.4	2	2	1	-	-	-	-	-	-	-	-	2	2	-	-
17CS73.5	2	2	1	-	-	-	-	-	-	-	-	2	2	-	-
<b>Avg. Mapping</b>	<b>2.0</b>	<b>2.0</b>	<b>1.0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.0</b>	<b>2.0</b>	<b>-</b>	<b>-</b>

## CO-PO-PSO JUSTIFICATION

CO No.	PO/PSO	CL	Justification
17CS73.1	PO1	2	Knowledge of various machine learning approaches involves solving complex engineering problems.
	PO2	2	Principles of mathematics and engineering sciences are used in various aspects of machine learning approaches.
	PO3	1	Supervised learning, unsupervised or reinforcement learning concepts can be used to design and conduct experiments to provide valid conclusions
	PO12	2	The student will become aware of the need for lifelong learning and the continued upgrading of technical knowledge.
	PSO1	2	Various learning approaches Acquire skills to design, analyse and develop algorithms and implement those using high-level programming languages.
17CS73.2	PO1	2	Knowledge of theoretical foundations of decision trees involves solving complex engineering problems.
	PO2	2	Principles of mathematics and engineering sciences are used in theoretical foundations of decision trees to identify best split.
	PO3	1	Knowledge of theoretical foundations of decision trees to identify best split can be used to design and develop solutions for complex engineering problems.
	PO12	2	The student will become aware of the need for lifelong learning and the continued upgrading of technical knowledge.
	PSO1	2	Theoretical foundations of decision trees to identify best split, Acquire skills to design, analyse and develop algorithms and implement them using high-level programming languages.
17CS73.3	PO1	2	Knowledge of classifier models applications helps in solving complex engineering problems.
	PO2	2	Principles of mathematics and engineering sciences are used in various aspects of classifier models.
	PO3	1	Knowledge of theoretical foundations of Artificial Neural networks, Back Propagation Neural Networks can be used to design and develop solutions for complex engineering problems.
	PO12	2	The student will become aware of the need for lifelong learning and the continued upgrading of technical knowledge
	PSO1	2	Theoretical foundations of Bayesian classifier, Acquire skills to design, analyse and develop algorithms and implement them using high-level programming languages
17CS73.4	PO1	2	Knowledge of Bayes theorem and concept learning, Naive Bayes classifier, Bayesian belief networks involves solving complex engineering problems.
	PO2	2	Principles of mathematics and engineering sciences are used in various aspects of Bayesian Learning and EM algorithm.

	PO3	1	Knowledge of theoretical foundations of Bayes theorem and concept learning, Naive Bayes classifier, Bayesian belief networks can be used to design and develop solutions for complex engineering problems.
	PO12	2	The student will become aware of the need for lifelong learning and the continued upgrading of technical knowledge
	PSO1	2	Study of classifier model working acquire skills to design, analyse and develop algorithms and implement them using high-level programming languages
17CS73.5	PO1	2	Understand the concept of Evaluating Hypothesis, Instance Based Learning-K- nearest neighbor learning, Reinforcement Learning.
	PO2	2	Principles of mathematics and engineering sciences are used in general Hypothesis, locally weighted regression, radial basis function.
	PO3	1	Knowledge of theoretical foundations of Reinforcement Learning, Learning Task, Q Learning can be used to design and develop solutions for complex engineering problems.
	PO12	2	The student will become aware of the need for lifelong learning and the continued upgrading of technical knowledge
	PSO1	2	Identification of classifier model application area contribute skills in computing and knowledge engineering domain.

**Prepared by**

**HoD**

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