Code: 20A33601T

R20

B.Tech III Year II Semester (R20) Regular Examinations August 2023

ADVANCED MACHINE LEARNING

(CSE (AI&ML))

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1		Answer the following: (10 X 02 = 20 Marks)	
	(a)	Differentiate supervised and unsupervised Machine Learning algorithm.	2M
	(b)	Describe Neural network representation with an example.	2M
	(c)	Define Stacked Denoising Autoencoders.	2M
	(d)	Write short notes on convnet topology.	2M
	(e)	What is random forest?	2M
	(f)	Write short notes on bagging.	2M
	(g)	How to create a feature set in feature engineering?	2M
	(h)	How to acquire data via RESTful APIS?	2M
	(i)	Define stacking ensembles.	2M
	(j)	What is the use of Lasagne?	2M

PART – B

(Answer all the questions: 05 X 10 = 50 Marks)

2	Discuss the fundamentals of Deep Belief Networks.	10M
	OR	
3	List and explain the applications of the Restricted Boltzmann Machine.	10M
4	Explain in detail about Denoising autoencoders.	10M
	OR	
5	Discuss in detail about convnet layers and pooling layers with a suitable example.	10M
6	Demonstrate about Semi-supervised algorithms in action with suitable example.	10M
	OR	
7	Briefly explain text feature engineering process with suitable example.	10M
8	Write short notes on testing the performance of our model with suitable example.	10M
	OR	
9	Briefly explain feature selection techniques.	10M
10	Demonstrate random forest with suitable example.	10M
	OR	
11	Discuss in detail about XGBoost.	10M

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R20

B.Tech III Year II Semester (R20) Supplementary Examinations January 2024

ADVANCED MACHINE LEARNING

(CSE (Artificial Intelligence and Machine Learning))

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1		Answer the following: (10 X 02 = 20 Marks)	
	(a)	Define Deep Belief Networks.	2M
	(b)	What is k in k-means algorithm? How it is selected?	2M
	(c)	Interpret the importance of auto encoder.	2M
	(d)	Write about Convolutional Neural Networks.	2M
	(e)	Define semi-supervised learning.	2M
	(f)	What is stemming?	2M
	(g)	List out the feature selection techniques.	2M
	(h)	What is feature engineering?	2M
	(i)	What is the use of Tensor flow?	2M
	(j)	How Boosting process improves model performance?	2M

PART – B

(Answer all the questions: 05 X 10 = 50 Marks)

2	Explain PCA and its process with their applications.	10M
	OR	
3	Write short notes on Restricted Boltzmann Machine.	10M
4	Demonstrate Convolutional Neural Networks with an example.	10M
	OR	
5	Explain in detail Stacked Denoising Autoencoders.	10M
6	Discuss in detail about Contrastive Pessimistic Likelihood Estimation.	10M
	OR	
7	Describe about bagging and random forest.	10M
8	Write about rescaling techniques to improve the learn ability of features.	10M
	OR	
9	How to deriving and selecting variables using feature engineering techniques? Explain.	10M
10	Briefly explain boosting methods with suitable example.	10M
	OR	
11	Write short notes on Lasagne and Tensor flow.	10M

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