Group Study Plan

28 July 2025 19:13

General Plan outline

Day	Total Time	Subjects	Homework
Monday	1.25 hrs	45 mins Maths 30 mins ACI	Maths exercises, Go through the topics
Tuesday	1.25 hrs	45 mins Machine Learning 30 mins ISM	Review derivations, Go through topics
Wednesday	1.25 hrs	45 mins Maths 30 mins ACI	Maths exercises, Go through the topics
Thursday	1.25 hrs	45 mins Machine Learning 30 mins ISM	Review derivations, Go through topics
Friday	1.25 hrs	45 mins Maths 30 mins ACI	Maths exercises, Go through the topics
Saturday & Sunday	Varies	Exercises / Topic Review	Practice exercises, Consolidate learning

After every 2 weeks

Friday - Go through previous years Questions 0.5 hour - Math's , 0.5 hour Machine Learning , 0.5 - ISM, 0.5 ACI

Date	Day	Subject 1	Topic	Subject 2	Topic	Homework
29-07-2025	Tuesday	Maths	1.1 Systems of Linear equations 1.2 Gaussian Elimination	ACI	1.1 WHAT IS AI? -AB 1.2 THE FOUNDATIONS OF ARTIFICIALINTELLIGENCE -AN 1.4 THE STATE OF THE ART- AN	Exercise 1.1 and 1.2
30-07-2025	Wednesday	Machine Learning	1.1 (T1) Introduction to ML - AB 1.2 Objective of the course -AB 1.3 Taxonomy (types) of Machine Learning -	ISM	T1 - 1.3(Measurement Levels), 1.4 (Describing Data)- AN T2- 1.3 (Measures of Location), 1.4 (Measures of	Try out Derivations, ISM- Exersises- T2 - Qno. 44,46, 51, 59, 63,74

			AB 1.4 Design a Learning System -AN 1.5 Challenges in Machine-AN Learning		Variability) - AB	
31-07-2025	Thursday	Maths	1.3 Vector Arithmetic 1.4 Arithmetic of Matrices 1.5 Matrix Algebra	ACI	Chapter 2 - 2.1Agents and Environments - AB 2.2 Good Behaviour : The concept of Rationality - AB 2.3 - Nature of Environments-AN 2.4 Structure of Agents - AN Try out Questions	Exercise 1.3 and 1.4, 1.5
01-Aug-25	Friday	Machine Learning	2.1 Types of Data - AB 2.2 Data Quality - AB 2.3 Data Preprocessing - AN 2.4 Measures of Similarity and Dissimilarity - AN	ISM	2.1 - Sample spaces and Events(T2)- AB 2.2Axioms , Interpretations and properties of Probability(T2)- AB Chapter 3- Probability(T1) - AN 3.1 Introduction (T1)- AN 3.2 Definitions of Probability(T1)-AN 3.3 Probability of	Exercise Section 2.1- 1, 5, 9 Section 2.2 11, 13, 14, 16, 18, 22, 27 Section 2.3 - 29, 30, 31, 35, 36, 43,

					Axioms(T1) -AN	
04-Aug-25	Monday	Maths	1.6 - The transpose and Inverse of a Matrix 1.7 - Types of solutions 1.8 - The inverse Matrix Method	ACI	Chapter 3 - Solving problems by Searching 3.1 Problem solving Agents-AB 3.2 Example Problems - AB 3.3 Searching For solutions - AN 3.4 Uninformed search Solutions - AN	Exercise Section-1.6 , 1.7, 1.8, Miscellaneous Exercise 1
05-Aug-25	Tuesday	Machine Learning	chapter - Exploring Data (R2) 3.1 Iris Dataset-AB 3.2 Summary Statistics-AB 3.3 Visualization-AN 3.4 OLAP and Multidimensional Analysis-AN	ISM	(T1)3.4 - Conditional Probability -AN (T2) - 2.4 - Conditional Probability-AB 2.5 - Independence -AN	Exercise Section 2.4 -45, 47, 49, 52, 59, 61, 68 Section-2.5 70, 76, 86, 92, 96, 99, 113
06-Aug-25	Wednesday	Maths	2.1 Properties of Vectors 2.2 Further Properties Vectors 2.3 Linear Independence 2.4 Basis and Spanning Set	ACI	3.5.1 Greedy best-first search -AN 3.5.2 A*search: Minimizing the total estimated solution cost -AN 3.6 - Heuristic Functions -	Exercise 2.1, 2.2, 2.3(Imp), 2.4(Imp)

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07-Aug-25	Thursday	Machine Learning	3. Linear models for Regression(T2) 3.1 Linear basis Function Models 3.1.1 Maximum likelihood and least squares - AB 3.1.2 Geometry of least squares - AN 3.1.3 Sequential learning AN	ISM	(T1) 4.2 Probability Density Functions -AN 4.2.1 Normal Density Functions- AN 4.7 Well known Discrete Functions - AN 4.7.1 Bernoulli Probability Mass Functions - AN 4.7.2 Binomial Probability Mass Functions - AN 4.7.3 Poisson Probability Mass functions - AN	
08-Aug-25	Friday	Maths	3.1 Introductio n to General Vector Spaces 3.2 Subspace of a Vector space 3.3 Linear Independe nceand Basis 3.4 Dimensions 3.5 Properties of a Matrix 3.6 Linear System Revisited		Exercise correspond ing Questions	