

Artificial Intelligence

Instructor: Dr. Soumajit Pramanik

Monsoon 2023



Marks Distribution

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- Two tierce exams - 45%
 - Assignment - 20%
 - Quizzes - 10%
 - Project/Presentation/Viva - 25%
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- Course Page - To be shared
 - TAs - Will be introduced
 - Attendance is mandatory

Coverage

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Introduction – Course Introduction, Motivation.

Problem solving by search – State Space, Problem Reduction, Graph Search, Game Playing.

Automated Reasoning – Propositional and first order logic, inference and deduction, resolution refutation

Planning – State-space, plan space and partial order planning, planning algorithms.

Reasoning under uncertainty – Probabilistic reasoning, belief networks.

Reinforcement Learning – MDP, Policy Search, Q-Learning, Applications.

Books

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- Stuart Russell, Peter Norvig, Artificial intelligence : A Modern Approach, Prentice Hall, Fourth edition, (<http://aima.cs.berkeley.edu/>)
- Sutton and Barto, Reinforcement Learning: An Introduction, 2nd Edition.
- David L. Poole and Alan K. Mackworth, Artificial Intelligence: Foundations of Computational Agents, 3rd Edition, (<https://artint.info/3e/html/ArtInt3e.html>)

Slides/Material Sources

Artificial Intelligence Courses by

1. Prof. Mausam, IIT Delhi
2. Prof. Pallab DasGupta & Prof. Partha Pratim Chakraborty, IIT Kharagpur
3. Prof. Percy Liang & Prof. Dorsa Sadigh, Stanford University

Slides from – by Stuart Russell, Henry Kautz, Subbarao Kambhampati, and UW-AI faculty