Artificial Intelligence-2 (CSL 7040)

Lecture 1: Introduction

Logistics

- Online Lectures
- Grading policy

Topic	Weightage
Mid sem 1	15%
Mid Sem 2	15%
End Sem	20%
Assignments	30% (Best 5 out of 6 short assignments)
Quiz	20% (Best 10 Out of 21 Short Quiz)

Logistics (continue)

- Approximately 24 lectures
- Approximately 6 short assignments
- Preferable language: Matlab, Python, …
- Assignments to be submitted within the given timeline **Delay in submission will cause penalty**
- Reports to be submitted for the assignments
- **Attendance rules of the institute will be followed**

Class timings

Saturday and Sunday: 8-9:30 AM

Instructors: Dr. Debarati (fractal-1) Sep 26 - Nov 1 **(Oct 31-Nov 1: Minor-1)**

Dr. Romi (fractal-2) Nov 7 - Dec 13 **(Dec 12-Dec 13: Minor-2)**

Dr. Anand (fractal-3) Dec 19 - Jan 31 **(Jan 27-Jan 30: End exam)**

Contents

Fractal 1

- **Making decisions:** Utility theory, utility functions, decision networks, sequential decision problems, Partially Observable MDPs, Game Theory (8 Lectures)

Fractal 2

- **Reinforcement Learning:** Passive RL, Active RL, Generalization in RL, Policy Search, (4 Lectures)
- **Probabilistic Reasoning over time:** Hidden Markov Models, Kalman Filters (4 Lectures)

Fractal 3

- **Knowledge Representation:** Ontological engineering, Situation Calculus, semantic networks, description logic (3 Lectures)
- **Planning:** Planning with state space search, Partial-Order Planning, Planning Graphs, Planning with Propositional Logic, hierarchical task network planning, non-deterministic domains, conditional planning, continuous planning, multi-agent planning (5 Lectures)

***Text Book**: S. RUSSEL, P. NORVIG (2009), Artificial Intelligence: A Modern Approach, Pearson, 3rd Edition.*

Guidelines for Fractal One

- Follow the class, ask question wherever you feel difficulties

- No ppts will be shared, hand written class notes will be shared in Google Classroom after each class (**Class Code:: v2nat3x**

Link:: https://classroom.google.com/c/MTc0ODQzNDYxNTk5?cjc=v2nat3x)

- There will be a quiz beginning of each class of duration 10 minutes (10 MCQs/ SAs)

- Approximate time division in each class of 90 minutes:

10 min (quiz)+ 35 min (lecture)+ 5 min (discussion)+35 min (lecture) + 5 min (discussion)

Any Question??

Thank You