# SARDAR VALLABHBHAI PATEL INSTITUTE OF TECHNOLOGY,VASAD

Academic Year: 2019-20_EVEN | Faculty Name: Ms. Vaibhavi Darshankumar Patel

Subject: Artificial Intelligence | Sem: 8 | ClassName: LYIT-1

| Sr. | Unit Number Name of Unit Hrs. Alloted by GTU | Lecture Number | Topics | Teaching Method | Teaching Aid | Online Posts (Y/N) |
|---|---|---|---|---|---|---|
| 1 | 1 What is AI? 2 | 1 | The AI problems, The underlaying assumption, AI Techniques, The AI problems, The underlaying assumption, AI Techniques, | Lecture | PPT | N |
| 2 | 2 Problem, State space search and heuristic search techniques 6 | 2 | Problem as a state space search, production system | Lecture | PPT | N |
| | | 3 | Issues annd problems in the design of search programs | Lecture | PPT | N |
| | | 4 | Generate-and-test, Hill climbing | Lecture | PPT | N |
| | | 5 | Best-first search, Problem reduction | Lecture | PPT | N |
| | | 6 | Constraint satisfaction | Lecture | PPT | N |
| | | 7 | means-ends analysis | Lecture | PPT | N |
| 3 | 3 Knowledge Representation Issues 2 | 8 | Representation and mappings | Lecture | PPT | N |
| | | 9 | Approaches to knowledge representation | Lecture | PPT | N |
| 4 | 4 Using Predicate Logic 5 | 10 | Representation of simple facts in logic | Lecture | PPT | N |
| | | 11 | Propositional logic | Lecture | PPT | N |
| | | 12 | Instance and Isa relationship | Lecture | PPT | N |
| | | 13 | computable functions and predicates | Lecture | PPT | N |
| | | 14 | Resolution | Lecture | PPT | N |
| 5 | 5 Representing knowledge using rules | 15 | Representing knowledge using rules | Lecture | PPT | N |
| | | 16 | logic programming | Lecture | PPT | N |
| | | 17 | Forward vs backword reasoning | Lecture | PPT | N |

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| | 3 | | | | | |
| 6 | 6 Symbolic Reasoning under uncertanity 3 | 18 | Non-monotonic reasoning | Lecture | PPT | N |
| | | 19 | logics for non-monotonic reasoning | Lecture | PPT | N |
| | | 20 | logics for non-monotonic reasoning | Lecture | PPT | N |
| 7 | 7 Statistical Reasoning 3 | 21 | Probability and Bay's theorem, certanity factors, rule-base system | Lecture | PPT | N |
| | | 22 | Rule-Base systems, Bayesian networks | Lecture | PPT | N |
| | | 23 | Dempster shafer Theory, Fuzzy Logic | Lecture | PPT | N |
| 8 | 8 Weak-slot-and-filler structures 2 | 24 | semantic nets | Lecture | PPT | N |
| | | 25 | Frames | Lecture | PPT | N |
| 9 | 9 strong-slot-and-filler structures 2 | 26 | Conceptual Dependency | Lecture | PPT | N |
| | | 27 | Scripts,CYC | Lecture | PPT | N |
| 10 | 10 Game Playing 5 | 28 | MinMax, Alpha-Beta Cut-off | Lecture | PPT | N |
| | | 29 | Refinements, Iterative Deepening,The Block world | Lecture | PPT | N |
| | | 30 | Components of a planning system, Goal stack planning | Lecture | PPT | N |
| | | 31 | Non-linear planning, hierarchical planning | Lecture | PPT | N |
| | | 32 | Reactive planning and other techniques | Lecture | PPT | N |
| 11 | 11 Understanding 2 | 33 | Whats is unerstanding? What make it hard? | Lecture | PPT | N |
| | | 34 | As constraint satisfaction | Lecture | PPT | N |
| 12 | 12 Natural Language | 35 | Introduction, Syntactic Processing, Semantic Analysis | Lecture | PPT | N |
| | | 36 | Discourse and Pragmatic Processing, Spell checking | Lecture | PPT | N |

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|---|---|---|---|---|---|---|
| | Processing 2 | | | | | |
| 13 | 13 Connectionist Models 5 | 37 | Introduction, Hopfield Network | Lecture | PPT | N |
| | | 38 | Neural network with applications | Lecture | PPT | N |
| | | 39 | Recurrent Networks | Lecture | PPT | N |
| | | 40 | Distribution Representations | Lecture | PPT | N |
| | | 41 | Connectionist AI and Symbolic AI | Lecture | PPT | N |
| References:<br>Artificial Intelligence By: Elaine Rich and Kevin Knight<br>Artificial Intelligence: A Modern Approach By Stuart Russel | | | | | | |

Signature