M.Sc.

(Computer Science)

Sem-I



A Text Book of

Artificial Intelligence

Subanggi Paatil

Archana Taru

Chitra Mandlik

According to New CBCS Syllabus 2019-20



According to New CBCS syllabus w.e.f.2019-2020

M.Sc. (Comp. Science) Sem - I

[Course Code- CSDT114B]

A Text Book of

Artificial Intelligence

Subanggi Paatil

M.Sc.(CS)

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Savitribal Phule Pune University (SPPU), Pune

Syllabus w.e.f. 2019-20

| Chapter. | Topics | No. of Lectures |
|----------|--|--------------------|
| 1. | Introduction to Artificial Intelligence: Introduction and Intelligent systems, What Is AI, The Foundations of Artificial Intelligence, The History of Artificial Intelligence, Applications of AI, Early work in AI and related fields, AI problems and Techniques. | 2 |
| 2. | Searching: -Defining AI problems as a State Space Search: example, Search and Control Strategies, Problem Characteristics, Issues in Design of Search Programs, Production System Blind Search Techniques: -BFS, DFS, DLS, Iterative Deepening, Search, Bidirectional Search, Uniform cost Search. Heuristic search techniques: -Generate and test, Hill Climbing, Best First search, Constraint Satisfaction, Mean-End Analysis, A*,AO*. | 8 |
| 3. | Knowledge Representation Representations and Mappings, Approaches to Knowledge Representation, Knowledge representation method, Propositional Logic, Predicate logic, Representing Simple facts in Logic, Resolution, Forward and backward chaining. Game Playing- Minimax Search Procedures, Adding alpha-beta cutoffs. | 8 |
| 4. | Introduction to Al with Python Introduction to Python, why python with Al, Features of Python, Basics of Python, Python statements, Methods & Functions using python, Basic and advanced modules &Packages, Python Decorators and generators. Advanced Objects & Data structures. | 6 |
| 5. | Machine Learning Why Machine learning, Types of Machine Learning: Supervised learning- Classification & Regression. Random Forest, KNN Algorithm. Unsupervised learning-Clustering & Association. Reinforcement learning. | 6 |



Master of Science (Computer Science) Sem-I

Paradigm of Programming Language (Compulsory)

Design and Analysis of Algorithms (Compulsory)

Database Technologies (Compulsory)

Cloud computing (Elective)

Artificial Intelligence (Elective)

Web Services (Elective)



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