Department of Information Technology

M.Tech.(ARTIFICIAL INTELLIGENCE & DATA SCIENCE)

(w.e.f. the batch of students admitted from the academic year 2024-2025)

Scheme(R21)

I YEAR I Semester

S.No	Code	SUBJECT	Scheme of Instruction periods per week		Scheme of Examination			Total
			Theory	Lab	Internal Marks	Semester End Exam Marks	Credits	
1	AD511	Advanced Data Structures and Algorithms	3		40	60	3	100
2	AD512	Principles of Artificial Intelligence	3		40	60	3	100
3	AD513	Introduction to data Science	3		40	60	3	100
4	AD514	Professional Elective-I	3		40	60	3	100
5	AD515	Professional Elective-II	3		40	60	3	100
6	AD516	Professional Elective-III	3		40	60	3	100
7	AD551	Advanced Data Structures and Algorithms Lab		4	40	60	2	100
8	AD552	Artificial Intelligence and Machine Learning Lab		4	40	60	2	100
		Total	**18**	**8**	**320**	**480**	**22**	**800**

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I YEAR II Semester

S.No	Code	SUBJECT	Scheme of Instruction periods per week		Scheme of Examination			Total
			Theory	Lab	Internal Marks	Semester End Exam Marks	Credits	
1	AD521	Advanced Java Programming	3		40	60	3	100
2	AD522	Generative AI	3		40	60	3	100
3	AD523	Data Visualization and Interpretation	3		40	60	3	100
4	AD524	Professional Elective-IV	3		40	60	3	100
5	AD525	Professional Elective-V	3		40	60	3	100
6	AD526	Professional Elective-VI	3		40	60	3	100
7	AD561	Advanced Java Programming Lab		4	40	60	2	100
8	AD562	Data Analytics Lab		4	40	60	2	100
9	MC01	Research Methodology and IPR	3		100	-	-	100
		Total	**21**	**8**	**420**	**480**	**22**	**900**

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II YEAR III Semester

S.No	Code	SUBJECT	Scheme of Instruction periods per week		Scheme of Examination			Total
			Theory	Lab	Internal Marks	Semester End Exam Marks	Credits	
1	AD611	MOOCS	-	-	-	100	2	100
2	AD651	Internship	-	-	100	-	2	100
3	AD652	Dissertation Phase-I	-	-	100	-	6	100
		Total	-	**-**	**200**	**100**	**10**	**300**

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II YEAR IV Semester

S.No	Code	SUBJECT	Scheme of Instruction periods per week		Scheme of Examination			Total
			Theory	Lab	Internal Marks	Semester End Exam Marks	Credits	
1	AD661	Dissertation Phase-II	-	-	40	60	14	100
		Total	-	**-**	**40**	**60**	**14**	**100**

Proposed Electives:

Professional Electives List	
Course Code	**Courses**
ADEL01	Statistics with R
ADEL02	Statistical Foundations For Data Science
ADEL03	Artificial Neural Networks
ADEL04	Machine Learning
ADEL05	Natural Language Processing
ADEL06	Computer Vision
ADEL07	Soft Computing
ADEL08	Reinforcement Learning
ADEL09	Big Data Analytics
ADEL10	Deep Learning
ADEL11	Optimization Techniques for Data Analysis
ADEL12	Data Science Applications of NLP
ADEL13	Generative AI Tools & Techniques
ADEL14	Virtual and Augmented Reality
ADEL15	Scalable Algorithms for Data Analysis
ADEL16	Web Mining and Social Network Analysis

ADEL17	Quantum Computing
ADEL18	Visual Recognition
ADEL19	Edge AI
ADEL20	Responsible AI
ADEL21	Optimization Techniques in Machine Learning
ADEL22	Information Retrieval
ADEL23	Image and Video Analytics
ADEL24	Industry Recommended Elective

AD 511	Advanced Data Structures and Algorithms	L	T	P	C	Int	Ext
	I Year I Semester	3	-	-	3	40	60

Course Objectives: At the end of the Course Students will understand
1. Fundamentals of analysis of algorithm at depth.
2. Study of advanced data structures and its uses.
3. Analysis of problems from different domains

Course Outcomes: After successful completion of this course, students are able to
1. Identify and use suitable data structures for given problem from different domains
2. Appreciate the role of Linked List algorithms in solving variety of problems
3. Appreciate the role of Optimization by using linear programming
4. Analyze the various algorithms from different domains.
5. Understand the importance of advanced algorithms and techniques.

UNIT- I [CO 1] [10 Periods]
Data Structures: Introduction, Algorithm Analysis: Asymptotic Notations.
Linked List: Introduction, operations on linked lists, applications of linked lists
Stack and Queue: Introduction, Array Representation of Stack, Linked List Representation of stack, Application of stack, Queue, Array Representation of Queue, Linked List Representation of Queue.

UNIT- II [CO 2] [10 Periods]
Trees: Definitions and Concepts, Representations of Trees, Tree Traversal, Binary Search Tree(BST): Representation, Operations on BST.
Graphs: Representations and Traversal Techniques, Hashing: hash functions, Collision resolution techniques.

UNIT- III [CO 3] [10 Periods]
Divide and Conquer: General Method, Merge sort, Quick sort,
Greedy Method: Knapsack Problem, Spanning Trees, Single Source Shortest Path.

UNIT- IV [CO 4] [10 Periods]
Dynamic Programing: Multi stage Graph, All pair shortest paths algorithm, Single Source Shortest Problem, 0/1 Knapsack Problem, String editing, Travelling Sales Person Problem.

UNIT- V [CO 5] [10 Periods]
Backtracking: N-Queen Problem, Graph coloring, Knapsack problem
Branch and Bound: 15 puzzle problem, 0/1 Knapsack problem, Travelling sales person problem

Text Book(s)::
1. Ellis Horowitz, Sartaj Sahni, Susan Anderson Freed. “Fundamentals of Data structures in C”, Second Edition, University Press, 2008(UNIT I & II).
2. Ellis Horowitz, Sartaj Sahni, S. Rajsekaran. “Fundamentals of computer algorithms”, Second Edition Galgotia Publications. (UNIT III, IV & V)

References Book(s)::
1. Robert Sedgewick Philippe Flajolet, “An Introduction to the Analysis of Algorithms”, First Edition,
2. G.A.V. Pai, “Data Structures and Algorithms”, TMH, 2009

AD 512	Principles of Artificial Intelligence	L	T	P	C	Int	Ext
	I Year I Semester	3	-	-	3	40	60

Course Objectives: At the end of the course the students will understand
1.To present fundamental concepts and problem solving methodologies of artificial intelligence.
2.To learn various search strategies and game playing methods
3.To describe logical representation of natural language sentences.
4.To present various knowledge representation strategies.

Course Outcomes: After successful completion of this course, students are able to
1. Explain the fundamental concepts of artificial intelligence and state space representation of aproblem.
2.Apply heuristic search techniques for solving simple AI problems and game playing strategies.
3. Inferring new knowledge using forward/ backward reasoning for the given natural language sentences .
4. Expain various knowledge representation techniques.

UNIT- I [CO 1] [10 Periods]
Introduction to Artificial Intelligence: Introduction, Brief History, Intelligent Systems, Foundations of AI, Sub-areas of AI, Applications, Tic-Tac-Toe Game Playing, Development of AI Languages, Current Trends in AI.
Problem Solving: State Space Search and Control Strategies: Introduction, General Problem Solving, Characteristics of Problem.

UNIT- II [CO 2] [12 Periods]
Search Techniques: Exhaustive Searches, Heuristic Search Techniques, Iterative Deepening A*, Constraint Satisfaction.
Problem Reduction and Game Playing: Introduction, Problem Reduction, Game Playing, Bounded Look-Ahead Strategy and Use of, Alpha- Beta Pruning, Two-Player Perfect Information Games.

UNIT- III [CO 3] [12 Periods]
Logic Concepts and Logic Programming: Introduction, Propositional Calculus, Propositional Logic, Natural Deduction System, Axiomatic System, Semantic Tableau System in Propositional Logic, Resolution Refutation in Proportional Logic, Predicate Logic, Logic Programming..

UNIT- IV [CO 4] [10 Periods]
Knowledge Representation: Introduction, Approaches to Knowledge Representation, Knowledge Representation using Semantic Network, Extended Semantic Networks for KR, Knowledge Representation using Frames.

UNIT- V [CO 4] [10 Periods]
Advanced Knowledge Representation Techniques: Introduction, Conceptual Dependency theory, Script Structure, CYC Theory, Case Grammars, and Semantic Web

Text Book(s):
1. Saroj Kaushik, Artificial Intelligence, CENGAGE Learning.

Reference Book(s):
1. Stuart Russel and Peter Norvig, Artificial Intelligence – A Modern Approach, 3rd Edition, Pearson Education/ PHI.
2. Elaine Rich & Kevin Knight, Artificial Intelligence, Pearson Education.

AD 513	Introduction to Data Science	L	T	P	C	Int	Ext
	I Year I Semester	3	-	-	3	40	60

Course Objectives: At the end of the course the students will understand
1. Fundamental concepts and architectures of database system
2. To impart features and design of conceptual and relational data models
3. The data science fundamentals and process.
4. The importance of choosing correct algorithms and data structures for handling large amounts of data
5. To analyze text mining techniques for handling large volumes of data and visualize the data.

Course Outcomes: After successful completion of this course, students are able to
1. Discuss the fundamental concepts and architecture of database systems and data models
2. Use relational query languages and SQL for querying the database.
3. Illustrate and explain the various stages of data science.
4. Implement distributing data storage and processing frameworks and identifying the differences between NoSQL and relational databases
5. Apply the data and text mining models to solve problems by extracting knowledge from data

UNIT- I [CO 1] [10 Periods]

Introduction to Databases: Introduction - An Example - Characteristics of the Database Approach - Actors on the Scene - Workers behind the Scene - Advantages of Using the DBMS Approach - A Brief History of Database Applications.

Overview of Database Languages and Architecture: Data Models, Schemas, and Instances - Three-Schema Architecture and Data Independence - Database Languages and Interfaces - The Database System Environment - Centralized and Client/Server Architectures for DBMSs - Classification of Database Management Systems.

UNIT- II [CO 2] [10 Periods]

Conceptual Data Modeling Using Entities and Relationships: Using High-Level Conceptual Data Models for Database Design – A Sample Database Application - Entity Types, Entity Sets, Attributes, and Keys - Relationship Types, Relationship Sets, Roles, and Structural Constraints - Weak Entity Types - Refining the ER Design for the COMPANY Database - ER Diagrams, Naming Conventions, and Design Issues.

SQL: SQL Data Definition and Data Types - Specifying Constraints in SQL – Basic Retrieval Queries in SQL-INSERT, DELETE, and UPDATE Statements in SQL-More Complex SQL Retrieval Queries- Views (Virtual Tables) in SQL-Schema Change Statements in SQL.

UNIT- III [CO 3] [12 Periods]

Data science in a big data world -Benefits and uses of data science and big data, Facets of data, The data science process, The big data ecosystem and data science, An introductory working example of Hadoop.

The data science process- Overview of the data science process, Step 1: Defining research goals and creating a project charter, Step 2: Retrieving data, Step 3: Cleansing, integrating, and transforming data, Step 4: Exploratory data analysis, Step 5: Build the models, Step 6: Presenting findings and building applications on top of them.

Machine learning - What is machine learning and why should you care about it? , The modeling process, Types of machine learning, Semi-supervised learning.

UNIT- IV [CO 4] [10 Periods]

Handling large data on a single computer- The problems you face when handling large data , General techniques for handling large volumes of data, General programming tips for dealing with large data sets, Case study 1: Predicting malicious URLs, Case study 2: Building a recommender system inside a database.

First steps in big data- Distributing data storage and processing with frameworks, Case study: Assessing risk when loaning money.

Join the NoSQL movement- Introduction to NoSQL, Case study: What disease is that?

UNIT- V [CO 5] [10 Periods]

The rise of graph databases- Introducing connected data and graph databases, Introducing Neo4j: a graph database, Connected data example: a recipe recommendation engine.

Data visualization to the end user- Data visualization options , Crossfilter, the JavaScript MapReduce lib, Creating an interactive dashboard with dc.js, Dashboard development tools.

Text mining and text analytics- Text mining in the real world , Text mining techniques: Bag of words, Stemming and lemmatization ,Decision tree classifier.

Text Book(s):

1.Database Systems, Ramez Elmasri and Shamkant B.Navathe, Pearson Education, 6th edition. (UNIT I, and UNIT II)

2. Introducing Data Science: Big Data, Machine Learning, and More, Using Python Tools, Davy Cielen, John Wiley & Sons. (UNIT III, UNIT IV, and UNIT V)

Reference Book(s):

1.Data Sciences & Analytics, V.K. Jain, Khanna Publishing House.

2.Business Analytics: The Science of Data - Driven Decision Making, U Dinesh Kumar, John Wiley & Sons.

3.Cathy O'Neil and Rachel Schutt. Doing Data Science, Straight Talk from The Frontline. O'Reilly Publisher.

4.Jake VanderPlas, Python Data Science Handbook, Shroff Publisher/O'Reilly PublisherMedia.

5.Philipp Janert, Data Analysis with Open Source Tools, Shroff Publisher/O'Reilly Publisher Media.

AD 514 (ADEL02)	STATISTICAL FOUNDATIONS FOR DATA SCIENCE I Year I Semester	L	T	P	C	Int	Ext
		3	-	-	3	40	60

Course Objectives: At the end of the Course Students will understand
1. To provide students with basic concepts of probability distributions.
2. To gain knowledge about random variables and its regression, correlations and curve fitting.
3. To decide whether to accept or reject a specific value of the parameters
4. To provide the most appropriate interval estimator of the parameters in statistical inferences
5. To avoid or at least minimize, the problems of estimating the effects of the independent variables by experimental designs.

Course Outcomes: After successful completion of this course, students are able to
1. Discrete and continuous random variables and various standard distributions and their properties.
2. Understand and apply the Curve fitting, regression and Correlation
3. Use statistical tests in testing the hypotheses on data
4. Interval estimation for population parameters such as mean and standard deviation.
5. List the guidelines for designing experiments and recognize the key historical figures in Design of Experiments.

UNIT- I [CO 1] [10 Periods]

PROBABILITY DISTRIBUTIONS

Random variables (Discrete and Continuous). Discrete distributions like Binomial and Poisson. Continuous distributions like Gamma and Normal distributions.

UNIT- II [CO 2] [10 Periods]

CURVE FITTING, REGRESSION AND CORRELATION

The method of least squares, Inferences based on the least squares estimators, Curve linear Regression, Multiple regression, checking the adequacy of the model, Correlation.

UNIT- III [CO 3] [10 Periods]

TESTING OF HYPOTHESIS

Sampling distributions-Type I and Type II errors-Tests basedon Normal, t, Chi square and F distributions for testing of mean, variance and proportions –Tests for independence of attributes and goodness of fit.

UNIT- IV [CO 4] [10 Periods]

ESTIMATION THEORY

Interval estimation for population mean - Standard deviation - Difference in means, proportion ratio of standard deviations and variances.

UNIT- V [CO 5] [10 Periods]

DESIGNOF EXPERIMENTS

Basic principles of design of experiments, Completely Randomized Design, Randomized Block Design, Latin Square Design

Text Book(s)::

1. Johnson,R.A.,Miller,I and Freund J.,"Miller and Freund' Probability and Statistics for Engineers", 9th Edition,Pearson Education,Asia,2016
2. Ellis Horowitz, Sartaj Sahni, S. Rajsekaran. "Fundamentals of computer algorithms", Second Edition Galgotia Publications. (UNIT III, IV & V)

References Book(s)::

1. Gupta S.C. and Kapoor V.K.," Fundamentals of Mathematical Statistics", 12th Edition, Sultan and Sons, New Delhi, 2020.
2. Devore,J.L., "Probability and Statistics for Engineering and Sciences", 8th Edition, Cengage Learning, 2014.
3. Rice, J.A., "Mathematical Statistics and Data Analysis", 3rd Edition, Cengage Learning, 2015.
4. Ross, S.M., "Introduction to Probability and Statistics for Engineers and Scientists", 5thEdition, Elsevier, 2014.

AD 515	ARTIFICIAL NEURAL NETWORKS	L	T	P	C	Int	Ext
(ADEL03)	I Year I Semester	3	-	-	3	40	60

Course Objectives: At the end of the Course Students will understand
1. Explain the principles and core components of these techniques.
2. Equip students with practical skills to learn various types of Artificial Neural Networks.
3. To investigate some common models and their applications

Course Outcomes: After successful completion of this course, students are able to
1. Understand the principles and concepts of neural networks and other related techniques.
2. Ability to select the Learning Networks in designing, training, and implementing neural networks real world systems
3. Ability to design, implement and evaluate associative memory networks, as well as their training methods and practical applications.
4. Implement common learning algorithms Adaptive resonance theory.
5. Describe back propagation neural networks to classification and recognition problems.

UNIT- I [CO 1] [10 Periods]

Artificial Neural Network - Definition, Advantages and Application scope of Neural Networks, Fundamental Concept, Evolution of Neural Networks , Basic Models of Artificial Neural Networks- Connections, Learning, Activation Functions, Important Terminologies of ANN's, McCulloch Pitt model, Linear separability

Simple Neural Networks for Pattern Classification: General Discussion, Hebb Net: Theory, Flowchart of Training Algorithm, Training Algorithm..

UNIT- II [CO 2] [10 Periods]

Supervised Learning Network- Introduction, perceptron Networks, Adaptive Linear Neuron, Multiple Adaptive Linear Neurons.
Unsupervised Learning Network- Introduction, Fixed Weight Competitive Nets, Hamming Network, Kohonen Self-Organizing Feature Maps, Learning Vector Quantization.

UNIT- III [CO 3] [10 Periods]

Associative Memory Networks: Introduction, Training Algorithms for Pattern Association, Hetero associative Memory Neural Network, Auto associative Net, Iterative Auto associative Net, Bidirectional Associative Memory (BAM).

UNIT- IV [CO 4] [10 Periods]

Adaptive Resonance Theory Network: Fundamental Architecture, Fundamental Algorithm
ART1: Architecture, Flowchart of Training process, Training Algorithm.
ART2: Architecture, Flowchart of Training process, Training Algorithm.

UNIT- V [CO 5] [10 Periods]

BACKPROPAGATION NEURAL NET: Standard Back Propagation Neural Net
Fixed Weight Nets for Constrained Optimization: Boltzmann Machine, Gaussian Machine, Cauchy Machine, Boltzmann with Machine Learning, Simple Recurrent Net.

Text Book(s):

1. Fundamentals of Neural Networks–Laurence Fausett, Pearson Education.2004
2. S.N.Sivanandam, S.N.Deepa "Principles of Soft Computing" Second Edition, Wiley Publication

References Book(s)::

1) Introduction to Neural Networks Using Matlab6.0- S.N. Sivanandam, S.Sumathi,S.N.Deepa.
2) Neural Networks –James A.Freeman/ David A.Skapura, Pearson Education.
3) Neural Networks –Simon Haykin–2nd edition, Pearson Education.
4) Satish Kumar "Neural Networks A Classroom Approach" Tata McGrawHill.
5) S.N.Sivanandam, S.N.Deepa "Principles of Soft Computing" Second Edition, Wiley Publication (for practicals)

AD 516	MACHINE LEARNING	L	T	P	C	Int	Ext
(ADEL04)	I Year I Semester	3	-		3	40	60

Course Objectives: At the end of the Course Students will understand
1. Basic concepts and applications of machine learning.
2. Supervised learning and its applications.
3. Unsupervised learning and its applications.

Course Outcomes: After successful completion of this course, students are able to
1. apply the machine learning concepts in real life problems.
2. design solutions for supervised learning problems.
3. use rule sets and reinforcement learning to solve real world problems.
4. discuss the issues in dimensionality reduction and unsupervised learning algorithms.

UNIT- I [CO 1] [10 Periods]

Introduction: Well posed learning problems, Designing a Learning System, Perspectives and Issues in machine learning, Supervised learning, Unsupervised learning.

Concept Learning and general to specific ordering: concept learning Task , Concept learning as a search, Find-S: Finding a Maximally Specific Hypothesis , Version Spaces and Candidate Elimination Algorithm..

UNIT- II [CO 2] [10 Periods]

Decision Tree Learning : Decision Tree Representation, appropriate problems for decision tree, the basic decision tree Algorithm, Issues in decision tree learning.

Bayesian Learning: Bayes Theorem, Maximum Likelihood and Least Square Error Hypotheses, Bayes Optimal Classifier, Naïve-Bayes Classifier, Bayesian Belief Network.

UNIT- III [CO 2] [10 Periods]

Neural Networks: Introduction, Neural Network Representation, appropriate problems for neural network, Perceptrons , Multilayer Networks and the Back Propagation Algorithm

Instance Based Learning: Introduction, KNN Learning, Locally Weighted Regression , Radial Bias Functions, Case-Based Reasoning

UNIT- IV [CO 3] [10 Periods]

Learning Sets of Rules: Sequential Covering Algorithm , Learning Rule Sets: summary , Learning First Order Rules, Learning set of first order rules: FOIL.

Reinforcement Learning: Introduction, the Learning Task , Q Learning , Non Deterministic Rewards and Actions , Temporal Difference Learning , Generalizing from Examples , Relationship to Dynamic Programming.

UNIT- V [CO 4] [10 Periods]

Clustering: Introduction, Partitioning methods: K-Means Clustering, Hierarchical methods: DIANA and AGNES, Density-Based Methods : DBSCAN, Grid-based Method: STING.

Association Rules : Introduction, Apriori algorithm and FP growth algorithm

Dimensionality Reduction : Introduction, Feature Selection methods: subset selection, Feature extraction methods: Principal component analysis, Multidimensional Scaling, Linear Discriminant analysis..

Text Book(s):

1. Tom M. Mitchell, —Machine Learning, McGraw-Hill Education (India) Private Limited, 2013. (UNIT I , UNIT II, UNIT III, and UNIT IV)
2. Ethem Alpaydin, Introduction to Machine Learning , MIT Press, Prentice Hall of India, Third Edition 2014. (UNIT V)

References Book(s)::

1) Data Mining Concepts & Techniques, Jiawei Han, Micheline Kamber, andJian Pei, 3/e, Morgan Kaufmann Publishers.
2) Stephen Marsland, —Machine learning: An Algorithmic Perspectivell, CRC Press, 2009
3) Machine Learning: a Probabilistic Perspective, Kevin P. Murphy, MIT Press, 2012.

AD 551	Advanced Data Structures and Algorithms Lab	L	T	P	C	Int	Ext
	I Year I Semester	-	-	4	2	40	60

Course Objectives: At the end of the Course Students will

1. Understand and Implement Core Data Structures.
2. Explore Advanced Data Structures and Algorithms.
3. Develop Problem-Solving Techniques with Algorithmic Strategies.
4. Enhance Computational Efficiency and Optimization.

Course Outcomes: After completion of course, the student will be able to

1. Implement linear and non-linear ADTs.
2. Solve real world problems using searching, sorting and hashing algorithms.
3. Develop solutions for the given problems using appropriate data structures.
4. Implement complex problems using the design strategy.

List of Experiments to implement:

1. Single Linked List ADT.
2. Single Circular List ADT.
3. Doubly Linked List ADT.
4. Stack ADT.
5. Queue ADT.
6. BST ADT.
7. Graph traversal techniques.
8. Hashing Techniques.
9. Problems related to Divide and Conquer strategy.
10. Problems related to Greedy Strategy.
11. Graph Related Problems using Greedy Strategy.
12. Problems related to Dynamic Programming.
13. Graph Related Problems using Dynamic Programming.
14. Problems related to Backtracking Strategy.
15. Problems related to Branch and Bound.
16. String Matching Problems.

AD 552	Artificial Intelligence and Machine Learning Lab	L	T	P	C	Int	Ext
	I Year I Semester	-	-	4	2	40	60

Course Objectives: The main objectives of this course are:

- Introduce Basic Python concepts, Numpy and Pandas
- Discuss Artificial Intelligence search algorithms and constraint satisfaction problems.
- Introduce basic concepts and applications of machine learning.
- Demonstrate supervised and unsupervised learning and its applications

Course Outcomes: After successful completion of the course, the students are able to:

1. Use Python concepts in implementing AI & ML algorithms.
2. Implement search and constraint satisfaction problems.
3. Implement machine learning solutions to classification, regression, and clustering.
4. Use machine algorithms to solve complex problems.

LAB CYCLE 01 – Programs in Python

- Usage of control structures
- Python Functions
- Python Lists
- NumPy arrays
- Pandas DataFrames

LAB CYCLE 02 – Programs in Aritificial Intelligence

- Tic-tac-toe game playing.
- Water-jug problem (BFS)
- A* Search (8-puzzle).
- N-Queen Problem (Constraint Satisfaction Problem).
- Graph Coloring Problem (Constraint Satisfaction Problem).

LAB CYCLE 03 – Programs in Machine Learning

- Concept Learning
- Bayesian Learning
- Decision Tree learning
- Neural network learning
- Instance based learning
- Unsupervised learning – Clustering and regression
- Supervised learning methods performance evaluation using scikit-learn package