Syllabus checklist 7 th sem

Entrepreneur ship

- [ ] UNIT-I
  Entrepreneurial perspective: Foundation,
- [ ] Nature and development of entrepreneurship,
- [ ] importance of
- [ ] entrepreneurs,
- [ ] Entrepreneurial Mind,
- [ ] Individual entrepreneur Typesof entrepreneurs,
- [ ] Entrepreneurship in India
- [ ] UNIT-II
  Beginning Considerations: Creativity and developing business ideas;
- [ ] Creating and starting the venture;
- [ ] Building
- [ ] a competitive advantage;
- [ ] Opportunity recognition,
- [ ] Opportunity assessment;
- [ ] Legal issues
- [ ]

DSCC

- [ ] UNIT-I
- [ ] Introduction to Distributed Systems:
- [ ] Characteristics of Distributed Systems-Introduction,
- [ ] Examples of Distributed systems (Client server,
- [ ] peer to peer,
- [ ] grid and cloud computing),
- [ ] Advantages of distributed systems,
- [ ] System models -Introduction,
- [ ] Architectural and Fundamental models,
- [ ] Networking and Internetworking,
- [ ] Interposes Communication (message passing and shared memory),
- [ ] Distributed objects and Remote Method Invocation,

- RPC,
- Events and notifications,
- Case study-Java RMI.
- UNIT-II
- Synchronization:
- Time and Global States-Introduction,
- Logical Clocks,
- Synchronizing physical clocks events and Process states,
- Synchronizing physical clocks,
- logical time and logical clocks,
- global states,
- distributed debugging,
- Coordination and Agreement:
- Distributed mutual exclusion,
- Elections,
- Multicast communication,
- consensus and related problems.
-

IPR

- UNIT-I
- Understanding & Overview of IPR Regime & Patents:
- Introduction,
- Need of Intellectual Property Rights,
- Types of Intellectual property,
- Rationale for protection of IPR,
- International Organizations,
- Agencies and Treaties,

- Importance of Intellectual Property Rights,
- IPR in India:
- Genesis and development,
- Impact of IPR on development,
- health agriculture and genetic resources in India.Patents:
- Definition of TRIPS,

- Kind of inventions protected by Patent,
- Process and Product Patent,
- Double Patent,
- Legal requirements for patents,
- Patent Application process,
- Searching a patent,
- Drafting and Filling of a Patent,
- Type of patent applications,
- Patent Specification and Claim,
- Management of IP Assets and IP Portfolio,
- Layers of International Patent System:
- National,
- Regional and International options
- UNIT-II
- Trademarks & Copyrights:
- Rights of Trademark,
- Purpose and Function of Trademark,
- Trademark registration,
- Trademark Acquisition,
- Trademark protection,
- Trademark Registration process.Law of Copy Rights,
- Rights and Protection covered by Copyright,
- Infringement of Copyright under Copyright Act,
- Distinction between related rights and copyright,
- Celebrity rights,
- Academic integrity or Plagiarism

MACHINE LEARNING

- UNIT-I
- Introduction:
- Machine learning,
- terminologies in machine learning,
- Perspectives and issues in machine learning,
- application of Machine learning,

- Types of machine learning:
- supervised,
- unsupervised,
- semi- supervised learning. Review of probability,
- Basic Linear Algebra in Machine Learning Techniques,
- Dataset and its types,
- Data preprocessing,
- Bias and Variance in Machine learning ,
- Function approximation,
- Overfitting
- UNIT-II
- Regression Analysis in Machine Learning:
- Introduction to regression and its terminologies,
- Types of regression,
- Logistic Regression﷽Simple Linear regression:
- Introduction to Simple Linear Regression and its assumption,
- Simple Linear Regression Model Building,
- Ordinary Least square estimation,
- Properties of the least-squares estimators and the fitted regression model,
- Interval estimation in simple linear regression ,
- Residuals﷽Multiple Linear Regression:
- Multiple linear regression model and its assumption,
- Interpret Multiple Linear Regression Output(
- R-Square,
- Standard error,
- F,
- Significance F,
- Cofficient P values),
- Access the fit of multiple
- linear regression model (
- R squared,
- Standard error)﷽Feature Selection and Dimensionality Reduction:
- PCA,

- LDA,
- ICA
-

Reinforcement Learning and deep learning

- UNIT-I
- Reinforcement Learning Foundation: Introduction to Reinforcement learning and its terms,
- Features and elements of RL,
- Defining RL Framework and Markov Decision Process ,
- Polices,
- Value Functions and Bellman Equations,
- Exploration vs. Exploitation,
- Code Standards and Libraries used in RL (Python/Keras/Tensorflow) Tabular Methods and Q-networks:
- Planning through the use of Dynamic Programming and Monte Carlo,
- Temporal-Difference learning methods (TD(0),
- SARSA,
- Q-Learning),
- Deep Q-networks (DQN,
- DDQN,
- Dueling DQN,
- Prioritised Experience Replay)
- UNIT-II
- Policy Optimization: Introduction to policy-based methods,
- Vanilla Policy Gradient,
- REINFORCE algorithm and stochastic policy search,
- Actor-critic methods (A2C,
- A3C) ,
- Advanced policy gradient (PPO,
- TRPO,
- DDPG),
- Model-Based RL: Model-based RL approach﷯Recent Advances and Applications: Meta-learning. Multi-Agent Reinforcement Learning,

- [ ] Partially Observable Markov Decision Process,
- [ ] Applying RL for real-world problems
- [ ]

Pattern Recognition and Computer vision

- [ ] UNIT-I
- [ ] Induction Algorithms.
- [ ] Rule Induction.
- [ ] Decision Trees.
- [ ] Bayesian Methods.
- [ ] Overview.
- [ ] Naïve Bayes.
- [ ] The Basic Naıve Bayes Classifier.
- [ ] Naive Bayes Induction for Numeric Attributes.
- [ ] Correction to the Probability Estimation.
- [ ] Laplace Correction.
- [ ] No Match.
- [ ] Other Bayesian Methods.
- [ ] Other Induction Methods.
- [ ] Neural Networks.
- [ ] Genetic Algorithms.
- [ ] Instance-based Learning.
- [ ] Support Vector Machines.

- [ ] UNIT-II
- [ ] About Statistical Pattern Recognition.
- [ ] Classification and regression.
- [ ] Features,
- [ ] Feature Vectors,
- [ ] and Classifiers.
- [ ] Pre-processing and feature extraction.
- [ ] The curse of dimensionality.
- [ ] Polynomial curve fitting.
- [ ] Model complexity.

- [ ] Multivariate non-linear functions.
- [ ] Bayes' theorem.
- [ ] Decision boundaries.
- [ ] Parametric methods.
- [ ] Sequential parameter estimation.
- [ ] Linear discriminant functions.
- [ ] Fisher's linear discriminant.
- [ ] Feed-forward network mappings.