NPTEL : Natural Language Processing (Computer Science and Engineering)

Co-ordinators : Prof. Pushpak Bhattacharya

NPTEL : Design and Analysis of Algorithms (Computer Science and Engineering)

Co-ordinators : Prof. Sundar Viswanathan, Prof. Ajit A Diwan, Prof. Abhiram G Ranade

NPTEL : Software Engineering (Computer Science and Engineering)

Co-ordinators : Prof. N.L. Sarda, Prof. Umesh Bellur, Prof. Rushikesh K Joshi

NPTEL : NOC:Software Testing (2017) (Computer Science and Engineering)

Co-ordinators : Prof. Meenakshi D'souza

NPTEL : NOC:Design and Pedagogy of the Introductory Programming Course (Computer Science and Engineering)

Co-ordinators : Prof. Abhiram G Ranade

NPTEL : NOC:An Introduction to Programming through C++ (Computer Science and Engineering)

Co-ordinators : Prof. Abhiram G Ranade

NPTEL : NOC:Demystifying Networking (Computer Science and Engineering)

Co-ordinators : Prof.Sridhar Iyer

Lecture 32 - Addressing in Pubilc and Private Networks

Lecture 33 - Verifying Connectivity using Ping

Lecture 34 - Using network address translation to communicate on internet

Lecture 35 - Using Sub nets and Summary of addressing

Lecture 36 - Summary of the week

Lecture 37 - Analogy for the week 2

Lecture 38 - Discussion on dabbawala analogy

Lecture 39 - From dabbawalas to routers and switches

Lecture 40 - What is routing ?

Lecture 41 - Static routing in a router in CPT

Lecture 42 - How does a switch forwards packets CPT

Lecture 43 - How to add static route in a router? (CPT)

Lecture 44 - Traveler's dilemma

Lecture 45 - Duscussing the Traveler's dilemma

Lecture 46 - From Traveler's dilemma to Dynamic Routing

Lecture 47 - Dynamic Routing with Distance Vector

Lecture 48 - Distance Vector Routing in Detail

Lecture 49 - Dynamic Routing with Link State

Lecture 50 - Setting up dynamic routing in Packet Tracer

Lecture 51 - Summary of the week

Lecture 52 - Introduction to analogy for week 3

Lecture 53 - Analogy for week 3

Lecture 54 - Questions on analogy for week 3

Lecture 55 - Understanding the new order requirements

Lecture 56 - Introduction to Tranport Layer

Lecture 57 - Introduction to TCP

Lecture 58 - Introduction to UDP

Lecture 59 - Exploring UDP on Cisco Packet Tracer

Lecture 60 - TCP Connection Establishment

Lecture 61 - TCP Connection Closure

Lecture 62 - Summay of TCP and UDP on Cisco Packet Tracer

Lecture 63 - The story of the delivery fiasco

Lecture 64 - From delivery fisaco to Port Numbers

NPTEL : NOC:Learning Analytics Tools (Computer Science and Engineering)

Co-ordinators : Prof. Ramkumar Rajendran

NPTEL : NOC:Design and Engineering of Computer Systems (Computer Science and Engineering)

Co-ordinators : Prof. Mythili Vutukuru

NPTEL : NOC:Software Conceptual Design (Computer Science and Engineering)

Co-ordinators : Prof. Sridhar Iyer, Prof. Prajish Prasad, Prof. T. G. Lakshmi

NPTEL : NOC:Introduction to Game Theory and Mechanism Design (Computer Science and Engineering)

Co-ordinators : Prof. Swaprava Nath

NPTEL : NOC:Introduction to Computer and Network Performance Analysis using Queuing Systems (Computer Science and Engineering)

Co-ordinators : Prof. Varsha Apte

NPTEL : Computational Geometry (Computer Science and Engineering)

Co-ordinators : Prof. Sandeep Sen

NPTEL : Logic for CS (Computer Science and Engineering)

Co-ordinators : Prof. S. Arun Kumar

NPTEL : Computer Architecture (Prof. Anshul Kumar) (Computer Science and Engineering)

Co-ordinators : Prof. Anshul Kumar

NPTEL : Data Structures And Algorithms (Computer Science and Engineering)

Co-ordinators : Prof. Naveen Garg

NPTEL : Introduction to Computer Graphics (Computer Science and Engineering)

Co-ordinators : Prof. Prem K Kalra

NPTEL : Principles of Programming Languages (Computer Science and Engineering)

Co-ordinators : Prof. S. Arun Kumar

NPTEL : Parallel Computing (Computer Science and Engineering)

Co-ordinators : Dr. Subodh Kumar

NPTEL : Operating Systems (Computer Science and Engineering)

Co-ordinators : Prof. Sorav Bansal

NPTEL : NOC:Computer Architecture (2017) (Computer Science and Engineering)

Co-ordinators : Prof. Smruti R.Sarangi

NPTEL : NOC:Introduction to Parallel Programming in OpenMP (Computer Science and Engineering)

Co-ordinators : Dr. Yogish Sabharwal

NPTEL : NOC:Synthesis of Digital Systems (Computer Science and Engineering)

Co-ordinators : Prof. Preeti Ranjan Panda

NPTEL : NOC:An Introduction to Artificial Intelligence (Computer Science and Engineering)

Co-ordinators : Prof. Mausam

NPTEL : NOC:Advanced Computer Architecture (2021) (Computer Science and Engineering)

Co-ordinators : Prof. Smruti R. Sarangi

NPTEL : NOC:Advanced Distributed systems (Computer Science and Engineering)

Co-ordinators : Prof. Smruti R. Sarangi

NPTEL : Design Verification and Test of Digital VLSI Circuits (Computer Science and Engineering)

Co-ordinators : Dr. Santosh Biswas, Prof. Jatindra Kumar Deka

NPTEL : NOC:Computer Organization and Architecture - A Pedagogical Aspect (Computer Science and Engineering)

Co-ordinators : Prof.Arnab sarkar, Prof.Jatindra Kumar Deka, Dr. Santosh Biswas

NPTEL : NOC:Embedded Systems-Design Verification and Test (Computer Science and Engineering)

Co-ordinators : Prof.Jatindra Kumar Deka, Dr. Santosh Biswas, Prof.Arnab Sarkar

NPTEL : NOC:Multi-Core Computer Architecture-Storage and Interconnects (Computer Science and Engineering)

Co-ordinators : Prof. John Jose

NPTEL : NOC:Multi-Core Computer Architecture (Computer Science and Engineering)

Co-ordinators : Prof. John Jose

NPTEL : NOC:Randomized Algorithms (Computer Science and Engineering)

Co-ordinators : Prof. Benny George K

NPTEL : NOC:Parallel Algorithms (Computer Science and Engineering)

Co-ordinators : Prof. Sajith Gopalan

NPTEL : NOC:Discrete Mathematics (Prof. Sajith Gopalan) (Computer Science and Engineering)

Co-ordinators : Prof. Benny George K

NPTEL : NOC:Advanced Computer Architecture (Computer Science and Engineering)

Co-ordinators : Prof. John Jose

NPTEL : NOC:User-centric Computing for Human-Computer Interaction (Computer Science and Engineering)

Co-ordinators : Prof. Samit Bhattacharya

NPTEL : NOC:Computer Graphics (Computer Science and Engineering)

Co-ordinators : Prof. Samit Bhattacharya

Lecture 32 - Concluding remarks

NPTEL : NOC:C-Based VLSI Design (Computer Science and Engineering)

Co-ordinators : Prof. Chandan Karfa

NPTEL : NOC:Design and Implementation of Human-Computer Interfaces (Computer Science and Engineering)

Co-ordinators : Prof. Samit Bhattacharya

NPTEL : Computer Algorithms - 2 (Computer Science and Engineering)

Co-ordinators : Prof. Shashank K. Mehta

NPTEL : Theory of Computation (Computer Science and Engineering)

Co-ordinators : Prof. Somenath Biswas

Lecture 1 - What is theory of computation? Set membership problem, basic notions like alphabet, strings, formal languages

Lecture 2 - Introduction to finite automaton

Lecture 3 - Finite automata continued, deterministic finite automata(DFAs), language accepted by a DFA

Lecture 4 - Regular languages, their closure properties

Lecture 5 - DFAs solve set membership problems in linear time, pumping lemma

Lecture 6 - More examples of nonregular languages, proof of pumping lemma, pumping lemma as a game, converse of pumping lemma does not hold

Lecture 7 - A generalization of pumping lemma, nondeterministic finite automata (NFAs), computation trees for NFAs

Lecture 8 - Formal description of NFA, language accepted by NFA, such languages are also regular

Lecture 9 - 'Guess and verify' paradigm for nondeterminism

Lecture 10 - NFA's with epsilon transitions

Lecture 11 - Regular expressions, they denote regular languages

Lecture 12 - Construction of a regular expression for a language given a DFA accepting it. Algebraic closure properies of regular languages

Lecture 13 - Closure properties (Continued...)

Lecture 14 - Closure under reversal, use of closure properties

Lecture 15 - Decision problems for regular languages

Lecture 16 - About minimization of states of DFAs. Myhill-Nerode theorem

Lecture 17 - Continuation of proof of Myhill-Nerode theorem

Lecture 18 - Application of Myhill-Nerode theorem. DFA minimization

Lecture 19 - DFA minimization (Continued...)

Lecture 20 - Introduction to context free languages (cfls) and context free grammars (cfgs). Derivation of strings by cfgs

Lecture 21 - Languages generated by a cfg, leftmost derivation, more examples of cfgs and cfls

Lecture 22 - Parse trees, inductive proof that L is L(G). All regular languages are context free

Lecture 23 - Towards Chomsky normal forms: elimination of useless symbols, analysis of reachable symbols, generating nonterminals, order of substeps matter

Lecture 24 - Simplification of cfgs continued, Removal of epsilon productions: algorithm and its correctness

Lecture 25 - Elimination of unit productions. Converting a cfg into Chomsky normal form. Towards pumping lemma for cfls

Lecture 26 - Pumping lemma for cfls. Adversarial paradigm

Lecture 27 - Completion of pumping lemma proof. Examples of use of pumping lemma. Converse of lemma does not hold. Closure properties of cfls

Lecture 28 - Closure properties continued. cfls not closed under complementation

Lecture 29 - Another example of a cfl whose complement is not a cfl. Decision problems for cfls

NPTEL : Introduction to Problem Solving and Programming (Computer Science and Engineering)

Co-ordinators : Prof. D. Gupta

NPTEL : Riemann Hypothesis and its Applications (Computer Science and Engineering)

Co-ordinators : Prof. Manindra Agrawal

NPTEL : Biometrics (Computer Science and Engineering)

Co-ordinators : Prof. Phalguni Gupta

NPTEL : Parallel Algorithm (Computer Science and Engineering)

Co-ordinators : Prof. Phalguni Gupta

NPTEL : Computer Architecture (Dr. Mainak Chaudhuri) (Computer Science and Engineering)

Co-ordinators : Dr. Mainak Chaudhuri

NPTEL : Compiler Design (Prof. Sanjeev K Aggarwal) (Computer Science and Engineering)

Co-ordinators : Prof. Sanjeev K Aggarwal

NPTEL : NOC : Introduction to programming in C (Computer Science and Engineering)

Co-ordinators : Prof. Satyadev Nandakumar

NPTEL : NOC:Fundamentals of Database Systems (Computer Science and Engineering)

Co-ordinators : Dr. Arnab Bhattacharya

NPTEL : NOC:Theory of Computation (Computer Science and Engineering)

Co-ordinators : Prof. Raghunath Tewari

NPTEL : NOC:Modern Algebra (Computer Science and Engineering)

Co-ordinators : Prof. Manindra Agrawal

NPTEL : NOC:Advanced Graph Theory (Computer Science and Engineering)

Co-ordinators : Dr.Rajiv Misra

NPTEL : NOC:Cloud Computing and Distributed Systems (Computer Science and Engineering)

Co-ordinators : Dr.Rajiv Misra

NPTEL : NOC:Big Data Computing (Computer Science and Engineering)

Co-ordinators : Dr. Rajiv Misra

NPTEL : NOC:Introduction to Blockchain Technology and Applications (Computer Science and Engineering)

Co-ordinators : Prof. Sandeep Shukla

NPTEL : NOC:Arithmetic Circuit Complexity (Computer Science and Engineering)

Co-ordinators : Prof. Nitin Saxena

NPTEL : NOC:Computational Complexity Theory (Computer Science and Engineering)

Co-ordinators : Prof. Raghunath Tewari

NPTEL : NOC:Randomized Methods in Complexity (Computer Science and Engineering)

Co-ordinators : Prof. Nitin Saxena

NPTEL : NOC:Probability for Computer Science (Computer Science and Engineering)

Co-ordinators : Prof. Nitin Saxena

Lecture 32 - Streaming Algorithms - II

NPTEL : NOC:Circuit Complexity Theory (Computer Science and Engineering)

Co-ordinators : Prof. Raghunath Tewari

NPTEL : NOC:Foundation of Cloud IoT Edge ML (Computer Science and Engineering)

Co-ordinators : Prof. Rajiv Misra

NPTEL : Cryptography and Network Security (Computer Science and Engineering)

Co-ordinators : Dr. Debdeep Mukhopadhyay

NPTEL : High Performance Computer Architecture (Computer Science and Engineering)

Co-ordinators : Prof. Ajit Pal

NPTEL : Low Power VLSI Circuits and Systems (Computer Science and Engineering)

Co-ordinators : Prof. Ajit Pal

NPTEL : Real Time Systems (Computer Science and Engineering)

Co-ordinators : Prof. Rajib Mall

NPTEL : Artificial Intelligence (Prof. Anupam Basu) (Computer Science and Engineering)

Co-ordinators : Prof. Sudeshna Sarkar, Prof. Anupam Basu

NPTEL : Artificial Intelligence (Prof. P. Dasgupta) (Computer Science and Engineering)

Co-ordinators : Prof. P. Dasgupta

NPTEL : Computer Networks (Computer Science and Engineering)

Co-ordinators : Prof. Sujoy Ghosh

NPTEL : Data Communication (Computer Science and Engineering)

Co-ordinators : Prof. Ajit Pal

NPTEL : Electronic Design Automation (Computer Science and Engineering)

Co-ordinators : Prof. Indranil Sengupta

NPTEL : Internet Technology (Computer Science and Engineering)

Co-ordinators : Prof. Indranil Sengupta

NPTEL : Programming and Data Structure (Computer Science and Engineering)

Co-ordinators : Dr. P.P. Chakraborty

Lecture 32 - Conclusions

NPTEL : NOC:Software Testing (Computer Science and Engineering)

Co-ordinators : Prof. Rajib Mall

NPTEL : NOC:Programming in C++ (Computer Science and Engineering)

Co-ordinators : Prof. Partha Pratim Das

NPTEL : NOC:Introduction to Machine Learning (Computer Science and Engineering)

Co-ordinators : Prof. S. Sarkar

NPTEL : NOC:Object-Oriented Analysis and Design (Computer Science and Engineering)

Co-ordinators : Prof. Partha Pratim Das

NPTEL : NOC:Complex Network : Theory and Application (Computer Science and Engineering)

Co-ordinators : Prof. Animesh Mukherjee

NPTEL : Fundamental Algorithms:Design and Analysis (Computer Science and Engineering)

Co-ordinators : Prof.Sourav Mukhopadhyay

NPTEL : NOC:Natural Language Processing (Computer Science and Engineering)

Co-ordinators : Prof. Pawan Goyal

Lecture 65 - Aspect - Based Sentiment Analysis

NPTEL : NOC:Embedded Systems Design (Computer Science and Engineering)

Co-ordinators : Prof. Anupam Basu

NPTEL : NOC:Wireless Ad Hoc and Sensor Networks (Computer Science and Engineering)

Co-ordinators : Prof. Sudip Misra

NPTEL : NOC:VLSI Physical Design (Computer Science and Engineering)

Co-ordinators : Prof. Indranil Sengupta

NPTEL : NOC:Cryptography And Network Security (Computer Science and Engineering)

Co-ordinators : Prof. Sourav Mukhopadhyay

NPTEL : NOC:Computer Architecture and Organization (Computer Science and Engineering)

Co-ordinators : Prof. Indranil Sengupta, Prof. Kamalika Datta

NPTEL : NOC:Introduction to Algorithms and Analysis (Computer Science and Engineering)

Co-ordinators : Prof. Sourav Mukhopadhyay

NPTEL : NOC:Hardware Modeling using Verilog (Computer Science and Engineering)

Co-ordinators : Prof. Indranil Sengupta

NPTEL : NOC:Introduction to Internet of Things (Computer Science and Engineering)

Co-ordinators : Prof. Sudip Misra

NPTEL : NOC:Cloud Computing (Computer Science and Engineering)

Co-ordinators : Prof. Soumya Kanti Ghosh

NPTEL : NOC:Problem Solving through Programming in C (Computer Science and Engineering)

Co-ordinators : Prof.Arnab sarkar, Prof.Jatindra Kumar Deka, Dr. Santosh Biswas

NPTEL : NOC:Real Time Operating System (Computer Science and Engineering)

Co-ordinators : Prof. Rajib Mall

NPTEL : NOC:Introduction to Soft Computing (Computer Science and Engineering)

Co-ordinators : Prof. Debasis Samanta

NPTEL : NOC:Data Mining (Computer Science and Engineering)

Co-ordinators : Prof. Pabitra Mitra

NPTEL : NOC:Data Base Management System (Computer Science and Engineering)

Co-ordinators : Prof. Partha Pratim Das

NPTEL : NOC:Software Engineering (Computer Science and Engineering)

Co-ordinators : Prof. Rajib Mall

NPTEL : NOC:Computer Networks and Internet Protocol (Computer Science and Engineering)

Co-ordinators : Prof. Sandip Chakraborty, Prof. Soumya Kanti Ghosh

NPTEL : NOC:Blockchain Architecture Design and Use Cases (Computer Science and Engineering)

Co-ordinators : Praveen Jayachandran, Prof. Sandip Chakraborty

NPTEL : NOC:Switching Circuits and Logic Design (Computer Science and Engineering)

Co-ordinators : Prof. Indranil Sengupta

NPTEL : NOC:Scalable Data Science (Computer Science and Engineering)

Co-ordinators : Prof. Sourangshu Bhattacharya, Prof. Anirban Dasgupta

NPTEL : NOC:Compiler Design (Computer Science and Engineering)

Co-ordinators : Prof. Santanu Chattopadhyay

NPTEL : NOC:Programming in Java (Computer Science and Engineering)

Co-ordinators : Prof. Debasis Samanta

NPTEL : NOC:Discrete Structures (Computer Science and Engineering)

Co-ordinators : Prof. Dipanwita Roychowdhury

NPTEL : NOC:Embedded System Design with ARM (Computer Science and Engineering)

Co-ordinators : Prof. Indranil Sengupta, Prof. Kamalika Datta

NPTEL : NOC:Hardware Security (Computer Science and Engineering)

Co-ordinators : Dr. Debdeep Mukhopadhyay

NPTEL : NOC:Introduction to Industry 4.0 and Industrial Internet of Things (Computer Science and Engineering)

Co-ordinators : Prof. Sudip Misra

Lecture 65 - Steel Technology Lab

NPTEL : NOC:Introduction to Automata, Languages and Computation (Computer Science and Engineering)

Co-ordinators : Prof. Sourav Mukhopadhyay

NPTEL : NOC:Operating System Fundamentals (Computer Science and Engineering)

Co-ordinators : Prof. Santanu Chattopadhyay

NPTEL : NOC:Deep Learning (Prof. P.K. Biswas) (Computer Science and Engineering)

Co-ordinators : Prof. P.K. Biswas

NPTEL : NOC:Computer Vision (Computer Science and Engineering)

Co-ordinators : Prof. Jayanta Mukhopadhyay

NPTEL : NOC:Ethical Hacking (Computer Science and Engineering)

Co-ordinators : Prof. Indranil Sengupta

NPTEL : NOC:Software Project Management (Computer Science and Engineering)

Co-ordinators : Prof. Durga Prasad Mohapatra

NPTEL : NOC:Spatial Informatics (Computer Science and Engineering)

Co-ordinators : Prof. Soumya Kanti Ghosh

NPTEL : NOC:GPU Architectures and Programming (Computer Science and Engineering)

Co-ordinators : Prof. Soumyajit Dey

NPTEL : NOC:Google Cloud Computing Foundation Course (Computer Science and Engineering)

Co-ordinators : Prof. Soumya Kanti Ghosh

NPTEL : NOC:Object Oriented System Development using UML, Java and Patterns (Computer Science and Engineering)

Co-ordinators : Prof. Rajib Mall

NPTEL : NOC:Data Structure and Algorithms using Java (Computer Science and Engineering)

Co-ordinators : Prof. Debasis Samanta

NPTEL : NOC:Real-Time Systems (Computer Science and Engineering)

Co-ordinators : Prof. Rajib Mall

NPTEL : NOC:Algorithms for Protein Modelling and Engineering (Computer Science and Engineering)

Co-ordinators : Prof. Pralay Mitra

NPTEL : NOC:Programming in Modern C++ (Computer Science and Engineering)

Co-ordinators : Prof. Partha Pratim Das

NPTEL : NOC:Blockchain and its Applications (Computer Science and Engineering)

Co-ordinators : Prof. Sandip Chakraborty, Prof. Shamik Sural

NPTEL : NOC:Algorithmic Game Theory (Computer Science and Engineering)

Co-ordinators : Prof. Palash Dey

NPTEL : NOC:Machine Learning for Earth System Sciences (Computer Science and Engineering)

Co-ordinators : Prof. Adway Mitra

NPTEL : NOC:Statistical Learning for Reliability Analysis (Computer Science and Engineering)

Co-ordinators : Prof. Monalisa Sarma

NPTEL : NOC:Foundations of Cyber Physical Systems (Computer Science and Engineering)

Co-ordinators : Prof. Soumyajit Dey

NPTEL : NOC:Selected Topics in Algorithms (Computer Science and Engineering)

Co-ordinators : Prof. Palash Dey

NPTEL : NOC:Foundations and Applications of Machine Learning (Bengali) (Computer Science and Engineering)

Co-ordinators : Prof. Adway Mitra

Lecture 1 - AI/ML à¦šà¦¾à¦°à¦ªà¦¾à¦¶à§‡à¦° à¦¨à¦¾à¦¨à¦¾ à¦‰à¦¦à¦¾à¦¹à¦°à¦£

Lecture 2 - AI/ML à¦à¦° à¦‰à¦ªà¦•à¦°à¦£

Lecture 3 - Supervised and Unsupervised Learning (à¦¤à¦¤à§à¦¤à§à¦¬à¦¾à¦¬à¦§à¦¾à¦¨à§‡ à¦“ à¦¤à¦¤à§à¦¤à§à¦¬à¦¾à¦¬à¦§à¦¾à¦¨à¦¹à§€à¦¨ à¦¶à¦¿à¦•à§à¦·à¦¾)

Lecture 4 - ML Model à¦“ Algorithm/à¦²à§‡à¦•à¦šà¦¾à¦° 04 : à¦à¦®à¦à¦² à¦®à¦¡à§‡à¦² à¦“ à¦…à§à¦¯à¦¾à¦²à¦—à¦°à¦¿à¦¦à¦®

Lecture 5 - AI/ML problem -à¦à¦° à¦—à¦ à¦¨ /à¦à¦†à¦‡/à¦à¦®à¦à¦² à¦¸à¦®à¦¸à§à¦¯à¦¾ - à¦à¦° à¦—à¦ à¦¨

Lecture 6 - K-nearest-neighbor classification/regression/K-à¦¨à¦¿à¦•à¦Ÿà¦¬à¦°à§à¦¤à§€-à¦ªà§à¦°à¦¤à¦¿à¦¬à§‡à¦¶à§€ à¦¶à§à¦°à§‡à¦£à§€à¦¬à¦¿à¦à¦¾à¦—/à¦°à¦¿à¦—à§à¦°à§‡à¦¶à¦¨

Lecture 7 - à¦¨à§ˆà¦ªà§à¦£à§à¦¯à§‡à¦° à¦ªà¦°à¦¿à¦®à¦¾à¦ª : Accuracy, Precision, Recall, Confusion

Lecture 8 - Discriminative Feature Selection

Lecture 9 - Decision Tree Algorithm/à¦¸à¦¿à¦¦à§à¦§à¦¾à¦¨à§à¦¤à¦²à¦¤à¦¿à¦•à¦¾

Lecture 10 - Classifier -à¦à¦° à¦¸à¦®à¦·à§à¦Ÿà¦¿ à¦“ Random Forests

Lecture 11 - Probability Theory à¦¿à¦«à§‡à¦° Îà¦¦à¦–

Lecture 12 - Bayesian à¦à¦¬à¦, NaÃ¯ve Bayes Classifier

Lecture 13 - Linear Algebra à¦¿à¦«à§‡à¦° Îà¦¦à¦–à¦¾

Lecture 14 - Linear Classifiers à¦à¦¬à¦, Perceptron Algorithm

Lecture 15 - Multi-class Linear Classifier à¦à¦¬à¦, Logistic Regression

Lecture 16 - Optimization à¦¿à¦«à§‡à¦° Îà¦¦à¦–à¦¾

Lecture 17 - Linear (à¦¸à¦°à¦²) à¦“ Regularized (à¦ªà¦¿à¦°à§‡à¦¶à¦¾à¦¿à¦§à¦¤) Regression

Lecture 18 - Max-margin Linear Classification/à¦¸à§‡à¦¬à¦¾Ð—Îº à¦¬Òà¦¬à¦§à¦¾à§‡à¦¨à¦° ÎÏœà¦£à§€à¦¿à¦¬à¦à¦¾à¦œà¦¨

Lecture 19 - à¦•à§ƒÎÏà¦® Ñ¹à¦¾à§Ÿà§à¦¤Ï´/Basic Neural Networks

Lecture 20 - Neural Network à¦—à¦ à¦¨ à¦“ Backpropagation

Lecture 21 - Overfitting and Underfitting

Lecture 22 - Boosting-à¦à¦° à¦®à¦¾à¦§Òà§‡à¦® à¦¸à¦®ÎœÑà¦¬Ð´ à¦…à¦¨à§à¦®à¦¾à¦¨

Lecture 23 - Data à¦° à¦®à¦¾Ïà¦¾ (dimensionality) à¦¿à¦¨à§ŸÏ´à¦£

Lecture 24 - à¦²à§‡à¦•à¦šà¦¾à¦° à§¨à§ªà¦ƒ à¦¶à§à¦°à§‡à¦£à§€ à¦“ à¦¬à§ˆà¦¶à¦¿à¦·à§à¦Ÿà§‡à¦° à¦®à¦¾à¦¨à§‡à¦° à¦…à¦¸à¦¾à¦®à§à¦¯

Lecture 25 - Supervised Learning à¦…à¦¿à¦à¦¯à¦¾à¦¨

Lecture 26 - Hierarchical Clustering/à¦¸à§à¦¤à¦°à¦à¦¿à¦¤à§à¦¤à¦¿à¦• à¦—à§‹à¦·à§à¦ à§€à¦•à¦°à¦£

Lecture 27 - K-means Clustering/ K-à¦—à§œ à¦—à§‹à¦·à§à¦ à§€à¦•à¦°à¦£

Lecture 28 - Evaluation of Clustering/à¦—à§‹à¦·à§à¦ à§€à¦•à¦°à¦£à§‡à¦° à¦®à§‚à¦²à§à¦¯à¦¾à§Ÿà¦¨

Lecture 29 - Mean-shift à¦à¦¬à¦, DB-Scan à¦—à§‹à¦·à§à¦ à§€à¦•à¦°à¦£

Lecture 30 - Graph-based Clustering/à¦—à§‹à¦·à§à¦ à§€à¦•à¦°à¦£

NPTEL : Pattern Recognition (Computer Science and Engineering)

Co-ordinators : Prof. Sukhendu Das, Prof. C.A. Murthy

NPTEL : Performance Evaluation of Computer Systems (Computer Science and Engineering)

Co-ordinators : Prof. Krishna Moorthy Sivalingam

NPTEL : Theory of Automata, Formal Languages and Computation (Computer Science and Engineering)

Co-ordinators : Prof. Kamala Krithivasan

NPTEL : Computer Graphics (Computer Science and Engineering)

Co-ordinators : Prof. Sukhendu Das

NPTEL : Computer Organization (Computer Science and Engineering)

Co-ordinators : Prof. S. Raman

NPTEL : Database Design (Computer Science and Engineering)

Co-ordinators : Dr. S. Srikanth, Prof. D. Janaki Ram

NPTEL : Discrete Mathematical Structures (Computer Science and Engineering)

Co-ordinators : Prof. Kamala Krithivasan

NPTEL : Artificial Intelligence (Prof. Deepak Khemani) (Computer Science and Engineering)

Co-ordinators : Prof. Deepak Khemani

NPTEL : NOC:Programming, Data Structures and Algorithms (Computer Science and Engineering)

Co-ordinators : Prof. Hema A Murthy, Prof. Shankar Balachandran, Dr. N.S. Narayanaswamy

NPTEL : NOC:Introduction to Information Security I (Computer Science and Engineering)

Co-ordinators : Prof. V. Kamakoti

Lecture 65 - Module 6 - Part 8

NPTEL : NOC:Programming and Data structures (PDS) (Computer Science and Engineering)

Co-ordinators : Dr. N S. Narayanaswamy

NPTEL : NOC:Design and Analysis of Algorithms (Computer Science and Engineering)

Co-ordinators : Prof. Madhavan Mukund

NPTEL : NOC:Programming, Data Structures and Algorithms (Aricent) (Computer Science and Engineering)

Co-ordinators : Dr. N S. Narayanaswamy, Prof. Shankar Balachandran, Prof. Hema A Murthy

NPTEL : NOC:Computer Architecture (Computer Science and Engineering)

Co-ordinators : Prof.Madhu Mutyam

NPTEL : NOC:Model Checking (Computer Science and Engineering)

Co-ordinators : Prof. B. Srivathsan

NPTEL : NOC:Functional Programming in Haskell (Computer Science and Engineering)

Co-ordinators : Prof. Madhavan Mukund, Prof. S P Suresh

NPTEL : Virtual Reality ()

NPTEL : NOC:Introduction to Machine Learning (Sponsored by Arihant) (Computer Science and Engineering)

Co-ordinators : Dr. Balaraman Ravindran

NPTEL : NOC:Artificial Intelligence: Knowledge Representation and Reasoning (Computer Science and Engineering)

Co-ordinators : Prof. Deepak Khemani

NPTEL : NOC:Information Security - II (Computer Science and Engineering)

Co-ordinators : Prof. V. Kamakoti

NPTEL : NOC:Algorithms for Big Data (Computer Science and Engineering)

Co-ordinators : Prof. John Augustine

NPTEL : NOC:Reinforcement Learning (Computer Science and Engineering)

Co-ordinators : Dr. B. Ravindran

NPTEL : NOC:Introduction to Operating Systems (Computer Science and Engineering)

Co-ordinators : Prof. Chester Rebeiro

NPTEL : NOC:Programming, Data Structures and Algorithms in Python (Computer Science and Engineering)

Co-ordinators : Prof. Madhavan Mukund

NPTEL : NOC:Privacy and Security in Online Social Networks (Computer Science and Engineering)

Co-ordinators : Prof. Ponnurangam Kumaraguru

Lecture 32 - Beware of What You Share Inferring Home Location in Social Networks

Lecture 33 - On the dynamics of username change behavior on Twitter

Lecture 34 - Boston Marathon Analyzing Fake Content on Twitter

NPTEL : NOC:Mobile Computing (Computer Science and Engineering)

Co-ordinators : Prof. Pushpendra Singh

NPTEL : NOC:Introduction to Modern Application Development (Computer Science and Engineering)

Co-ordinators : Tanmai Gopal, Prof. Gaurav Raina

NPTEL : NOC:Information Security-3 (Computer Science and Engineering)

Co-ordinators : Prof. V. Kamakoti

NPTEL : NOC:AI:Constraint Satisfaction (Computer Science and Engineering)

Co-ordinators : Prof. Deepak Khemani

NPTEL : NOC:Computer Organization (Computer Science and Engineering)

Co-ordinators : Prof. V. Kamakoti

NPTEL : NOC:Introduction to Wireless and Cellular Communications (Computer Science and Engineering)

Co-ordinators : Prof. David Kovil Pillai

NPTEL : NOC:Distributed Systems (Computer Science and Engineering)

Co-ordinators : Dr. Rajiv Misra

NPTEL : NOC:Social Networks (Computer Science and Engineering)

Co-ordinators : Prof. Sudarshan Iyengar

NPTEL : NOC:An Introduction to Probability in Computing (Computer Science and Engineering)

Co-ordinators : Prof. John Augustine

NPTEL : NOC:Introduction to Human Computer Interaction (Computer Science and Engineering)

Co-ordinators : Prof. Ponnurangam Kumaraguru

NPTEL : NOC:Information Security-IV (Computer Science and Engineering)

Co-ordinators : Prof.M J Shankar Raman, Prof. V. Kamakoti, Prof.Vasan

NPTEL : NOC:Data Science for Engineers (Computer Science and Engineering)

Co-ordinators : Prof. Shankar Narasimhan, Prof. Ragunathan Rengasamy

NPTEL : NOC:The Joy of Computing using Python (Computer Science and Engineering)

Co-ordinators : Prof. Sudarshan Iyengar

NPTEL : NOC:Discrete Mathematics (Computer Science and Engineering)

Co-ordinators : Prof. Sudarshan Iyengar

NPTEL : NOC:Deep Learning (Computer Science and Engineering)

Co-ordinators : Prof.Mitesh Khapra

NPTEL : NOC:Foundations to Computer Systems Design (Computer Science and Engineering)

Co-ordinators : Prof. V. Kamakoti

NPTEL : NOC:Machine Learning for Engineering and Science Applications (Computer Science and Engineering)

Co-ordinators : Prof. Ganapathy, Prof. Balaji Srinivasan

NPTEL : NOC:Information Security 5 - Secure Systems Engineering (Computer Science and Engineering)

Co-ordinators : Prof. Chester Rebeiro

NPTEL : NOC:Multimodal Interaction (Computer Science and Engineering)

Co-ordinators : Dr. Stefan Hillmann, Prof. Dr. Sebastian Moller

NPTEL : NOC:Deep Learning - Part 2 (Computer Science and Engineering)

Co-ordinators : Prof.Mitesh Khapra

NPTEL : NOC:Machine Learning (Computer Science and Engineering)

Co-ordinators : Prof. Henrik Bostrom, Prof. Fredrik Kilander, Prof. Carl Gustaf Jansson

NPTEL : NOC:C Programming and Assembly Language (Computer Science and Engineering)

Co-ordinators : Prof. Janakiraman Viraraghavan

NPTEL : NOC:Applied Natural Language Processing (Computer Science and Engineering)

Co-ordinators : Prof. Ramaseshan R

NPTEL : NOC:Python for Data Science (Computer Science and Engineering)

Co-ordinators : Prof. Ragunathan Rengasamy

NPTEL : NOC:Practical Machine Learning with Tensorflow (Computer Science and Engineering)

Co-ordinators : Dr. B. Ravindran

NPTEL : NOC:Introduction to Database Systems (Computer Science and Engineering)

Co-ordinators : Prof. P.Sreenivasa Kumar

NPTEL : NOC:Foundations of Cryptography (Computer Science and Engineering)

Co-ordinators : Prof. Ashish Choudhury

NPTEL : NOC:Modern Application Development (Computer Science and Engineering)

Co-ordinators : Prof. Madhavan Mukund, Prof. Abhijat Vichare, Prof. Aamod Sane

NPTEL : NOC:Deep Learning for Computer Vision (Computer Science and Engineering)

Co-ordinators : Prof. Vineeth N Balasubramanian

NPTEL : NOC:Artificial Intelligence Search Methods For Problem Solving (Computer Science and Engineering)

Co-ordinators : Prof. Deepak Khemani

NPTEL : NOC:Computational Complexity (Computer Science and Engineering)

Co-ordinators : Prof. Subrahmanyam Kalyanasundaram

NPTEL : NOC:Parameterized Algorithms (Computer Science and Engineering)

Co-ordinators : Prof. Neeldhara Misra

NPTEL : NOC:Getting Started with Competitive Programming (Computer Science and Engineering)

Co-ordinators : Prof. Neeldhara Misra

NPTEL : NOC:Introduction to Quantum Computing: Quantum Algorithms and Qiskit (Computer Science and Engineering)

Co-ordinators : Prof. Prabha Mandayam

NPTEL : NOC:Systems and Usable Security (Computer Science and Engineering)

Co-ordinators : Prof. Neminath Hubballi

NPTEL : NOC:Online Privacy (Computer Science and Engineering)

Co-ordinators : Prof. Ponnurangam Kumaraguru

NPTEL : NOC:Introduction to Machine Learning (Tamil) (Computer Science and Engineering)

Co-ordinators : Prof. Arun Rajkumar

NPTEL : Compiler Design (Prof. Rupesh Nasre) (Computer Science and Engineering)

Co-ordinators : Prof. Rupesh Nasre

Lecture 1 - Introduction - Part 1, Programming languages and compilers

Lecture 2 - Introduction - Part 2, Language translators

Lecture 3 - Introduction - Part 3, Phases of a compiler

Lecture 4 - Introduction - Part 4, Static vs Dynamic contexts,Parameter passing

Lecture 5 - Lexing - Part 1, Terminology, Regex, flex tool- Part 1

Lecture 6 - Lexing - Part 2, Lexical errors, Input buffering

Lecture 7 - flex tool- Part 2

Lecture 8 - Lexing - Part 3, Lookahead, KMP string matching

Lecture 9 - Lexing - Part 4, Regex to DFA conversion - Part 1

Lecture 10 - Lexing - Part 5, Regex to DFA conversion - Part 2, Prasing - Part 1

Lecture 11 - Parsing - Part 2, CFG, Parse tree, Precedence, Ambiguity

Lecture 12 - flex tool - Part 3

Lecture 13 - Parsing - Part 3, Sentinel forms, Error recovery, if-else ambiguity

Lecture 14 - Parsing - Part 4, Left recursion, Recursive descent parsing

Lecture 15 - Parsing - Part 5, First and Follow, Predicitive parsing table

Lecture 16 - Parsing - Part 6, Predictive parsing table, LL(1) grammars

Lecture 17 - Discussions and doubts clarification - Part 1

Lecture 18 - Parsing - Part 6, Bottom-up, Shift-reduce parsing, SLR parsing

Lecture 19 - Parsing - Part 6, LR(0) automaton, SLR parsing using automaton

Lecture 20 - Parsing - Part 7, SLR(1) parsing table, SLR(1) parsing algorithm

Lecture 21 - Parsing - Part 8, Viable prefixes, LR(1) parsing, LR(1) automaton

Lecture 22 - Parsing - Part 9, LALR parsing, SDT- Part 1, attributes

Lecture 23 - Syntax Directed Translation - Part 2, S- and L-attributed SDD

Lecture 24 - Syntax Directed Translation - Part 3, L-attributed SDD, Applications

Lecture 25 - Syntax Directed Translation - Part 4, Actions within productions

Lecture 26 - Discussions and doubts clarification - Part 2

Lecture 27 - Quiz-1 discussion, SDT - Part 5, Code generation for while loop

Lecture 28 - Intermdiate Code Generation - Part 1, Syntax trees and DAGs

Lecture 29 - Intermdiate Code Generation - Part 2, Three-address code

Lecture 30 - Discussions and doubts clarification Part 3

Lecture 31 - Intermdiate Code Generation - Part 3, Static single assignment

NPTEL : NOC:Applied Accelerated Artificial Intelligence (Computer Science and Engineering)

Co-ordinators : Prof. Satyadhyan Chickerur, Prof. Bharatkumar Sharma, Prof. Adesuyi Tosin, Prof. Satyajit Das

NPTEL : NOC:Social Network Analysis (Computer Science and Engineering)

Co-ordinators : Prof. Tanmoy Chakraborty

Lecture 32 - Chapter 5 Lectuer 6

Lecture 33 - Chapter 5 Lectuer 7

Lecture 34 - Chapter 5 Lectuer 8

Lecture 35 - Chapter 5 Lectuer 9

Lecture 36 - Chapter 5 Lectuer 10

Lecture 37 - Chapter 6 Lectuer 1

Lecture 38 - Chapter 6 Lectuer 2

Lecture 39 - Chapter 6 Lectuer 3

Lecture 40 - Chapter 6 Lectuer 4

Lecture 41 - Chapter 6 Lectuer 5

Lecture 42 - Chapter 7 Lectuer 1

Lecture 43 - Chapter 7 Lectuer 2

Lecture 44 - Chapter 7 Lectuer 3

Lecture 45 - Chapter 7 Lectuer 4

Lecture 46 - Chapter 7 Lectuer 5

Lecture 47 - Chapter 7 Lectuer 6

Lecture 48 - Chapter 7 Lectuer 7

Lecture 49 - Chapter 7 Lectuer 8

Lecture 50 - chapter 8 Lectuer 1

Lecture 51 - chapter 8 Lectuer 2

Lecture 52 - Chapter 8 Lectuer 3

Lecture 53 - Chapter 8 Lectuer 4

Lecture 54 - Chapter 8 Lectuer 5

Lecture 55 - Chapter 8 Lectuer 6

Lecture 56 - Chapter 9 Lectuer 1

Lecture 57 - Chapter 9 Lectuer 2

Lecture 58 - Chapter 9 Lectuer 3

Lecture 59 - Chapter 9 Lectuer 4

Lecture 60 - Chapter 9 Lectuer 5

Lecture 61 - Chapter 9 Lectuer 6

Lecture 62 - Chapter 9 Lectuer 7

Lecture 63 - Chapter 9 Lectuer 8

Lecture 64 - Chapter 9 Lectuer 9

NPTEL : NOC:Quantum Algorithms and Cryptography (Computer Science and Engineering)

Co-ordinators : Prof. Shweta Agrawal

NPTEL : NOC:Theory of Computation (2023) (Computer Science and Engineering)

Co-ordinators : Prof. Subrahmanyam Kalyanasundaram

NPTEL : NOC:Advanced Computer Networks (Computer Science and Engineering)

Co-ordinators : Prof. Neminath Hubballi, Prof. Sameer Kulkarni

NPTEL : NOC:Affective Computing (Computer Science and Engineering)

Co-ordinators : Prof. Jainendra Shukla, Prof. Abhinav Dhal

NPTEL : NOC:Optimisation for Machine Learning: Theory and Implementation (Hindi) (Computer Science and Engineering)

Co-ordinators : Prof. Pravesh Biyani

NPTEL : ACM India - RBCDSAI Summer School on DS-AI-ML (Computer Science and Engineering)

Co-ordinators : Multi-Faculty

NPTEL : NOC:Machine Learning (ML) in Hindi (Computer Science and Engineering)

Co-ordinators : Prof. Anubha Gupta

NPTEL : NOC:Cyber Security and Privacy (Computer Science and Engineering)

Co-ordinators : Prof. Saji K Mathew

NPTEL : NOC:Introduction to Cryptology (Computer Science and Engineering)

Co-ordinators : Dr. Sugata Gangopadhyay

NPTEL : NOC:Data Analytics with Python (Computer Science and Engineering)

Co-ordinators : Prof. A. Ramesh

NPTEL : Combinatorics (Computer Science and Engineering)

Co-ordinators : Dr. L. Sunil Chandran

NPTEL : Compiler Design (Prof. Y.N. Srikanth) (Computer Science and Engineering)

Co-ordinators : Prof. Y.N. Srikanth

NPTEL : Graph Theory (Computer Science and Engineering)

Co-ordinators : Dr. L. Sunil Chandran

NPTEL : High Performance Computing (Computer Science and Engineering)

Co-ordinators : Prof. Mathew Jacob

NPTEL : Numerical Optimization (Computer Science and Engineering)

Co-ordinators : Dr. Shirish K. Shevade

NPTEL : Storage Systems (Computer Science and Engineering)

Co-ordinators : Dr. K. Gopinath

NPTEL : System Analysis and Design (Computer Science and Engineering)

Co-ordinators : Prof. V. Rajaraman

NPTEL : Principles of Compiler Design (Computer Science and Engineering)

Co-ordinators : Prof. Y.N. Srikanth

NPTEL : NOC:Discrete Mathematics (IIITB) (Computer Science and Engineering)

Co-ordinators : Prof. Ashish Choudhury

NPTEL : NOC:Secure Computation: Part I (Computer Science and Engineering)

Co-ordinators : Prof. Ashish Choudhury

NPTEL : NOC:Secure Computation - Part II (Computer Science and Engineering)

Co-ordinators : Prof. Ashish Choudhury