Suggested link of Video lectures for Diploma (Information Technology) Students

Subject Name :AI & Expert System
Subject Code :IT 622

S. No.	Course Content	Video URL Link
1	**INTRODUCTION TO AI** Meaning and definition of Artificial Intelligence Characteristics of AI Problems Scope and Future Expectation of AI Application of AI	https://www.youtube.com/watch?v=J7LqgglEfQw&list=PL9zFgBale5fug7z_YlD9M0x8gdZ7ziXen
2	**PROBLEM SOLVING AND CONTROL STRATEGIES** State Space Representation Problem Characteristics Production System and its type Characteristics of Production System Breadth First Search and Depth First Search Forward and Backward Chaining Control Strategies and its Type	
3	**HEURISTIC SEARCH TECHNIQUES** • Hill Climbing • Branch and Bound Technique • Best First Search Technique and algorithm • A* Algorithm and AO* Algorithm • Constraints Satisfaction and related numeric problems	https://www.youtube.com/watch?v=Xm7lqyYHPj8
4	**KNOWLEDGE REPRESENTATION** Representation and Mapping Approaches to Knowledge Representation Issues in Knowledge Representation Knowledge Representation using Predicate Logic and Prepositional Logic Resolution and Refutation Deduction, Theorem Proving Procedural Knowledge and Declarative Knowledge Introduction to Reasoning Various types of Reasoning methods like Forward, Backward, monotonic, non-monotonic, probabilistic Baye's Theorem, Bayesian Network Semantic Networks, Frames Conceptual Dependency, Scripts	https://www.youtube.com/watch?v=japhjrVxJdg
5	**LEARNING AND NATURAL LANGUAGE PROCESSING** Introduction to Learning Types of Learning Learning in neural network Learning Processes :- Error Correction Learning, Memory based Learning, Hebbian Learning, Competitive Learning	ttps://www.youtube.com/watch?v=9iN3O_oL2a

	Learning with teacher, Learning without teacher Introduction to NLP and its different Phases Parsing Techniques, Context Free Grammar	
	Recursive Transition nets (RTN), Augmented Transition nets (ATN) CSE and Logic Grammars, Semantic Analysis	
6	**GAME PLAYING** Introduction to Game Playing Mini max Search Procedure Alpha-Beta Cut offs	https://www.youtube.com/watch?v=-qI5hvaITH0 https://www.youtube.com/watch?v=9iN3O_oL2ac
7	**EXPERT SYSTEM**	https://www.youtube.com/watch?v=JvciXaqo9Rk
	Definition and Characteristics of Expert System Rule Based System Architecture	https://www.youtube.com/watch?v=ccivrsjMsXw
	Non- Production System Architecture Knowledge Acquisition and Validation	https://www.youtube.com/watch?v=y2HQmvqXON4
	Expert System Life Cycle and Expert System Tools	https://www.youtube.com/watch?v=oL8ApH82s6s
	MYCIN and DENDRAL examples of Expert System	https://www.youtube.com/watch?v=IpBZ01g0pGE https://www.youtube.com/watch?v=4dwsSz_fNSQ https://www.youtube.com/watch?v=nhMJX61oF9g https://www.youtube.com/watch?v=pHiIwQk57dc https://www.youtube.com/watch?v=b4nbE-pG_TM https://www.youtube.com/watch?v=FFzdXJ49KAI https://www.youtube.com/watch?v=T3cOU_ljfr8

Suggested link of Video lectures for Diploma (Information Technology) Students

Subject Name :Computer graphics & Multimedia animation
Subject Code :IT 601

S. No.	Course Content	Video URL Link
1	**Introduction to Computer Graphics** o Definition of Computer Graphics o Application of Computer Graphics o Graphics Hardware o Input and Output Devices o Display Devices o Refreshing Display Devices Raster-Scan Random-Scan	https://youtu.be/228oQA2xAEs
2	**Graphics Primitives:** o Points and Lines o Line-drawing Algorithms § DDA Algorithm § Bresenham's line Algorithm o Circle-generating Algorithm § Midpoint Circle of Algorithm o Polygon Filling Algorithm: Scan-Line	https://www.youtube.com/watch?v=k8r_Fo4Ot5A
3	**Transformation, 2-D Viewing and Clipping** • **Basic Transformations (2D and 3D)** o Translation o Rotation o Scaling o Shear o Reflection • **Composite Transformations** o Rotations about a point o Reflection about a line o Homogeneous Coordinate Systems	https://www.youtube.com/watch?v=OhghEhzjx8s&list=PLrP-pAdcAQnunuZCS1OAWTWCDHJqjk6Gk&index=37&t=0s

	• **Clipping**	
	Point Clipping	
	Line Clipping -Cohen-Sutherland Clipping algorithm. Polygon Clipping: Sutherland Hodgeman Algorithm Windowing Transformation	https://www.youtube.com/watch?v=7prZ5aZt9Ow&list=PLrP-pAdcAQnunuZCS1OAWTWCDHJqjk6Gk
4	**Projection**	
	Parallel Projection: Orthographic, Axonometric, Oblique Perspective Projection: Standard Perspective Projection General Perspective Projection, Vanishing Points	
5	**Shading, Colour model and Illumination**	https://www.youtube.com/watch?v=7prZ5aZt9Ow&list=PLrP-pAdcAQnunuZCS1OAWTWCDHJqjk6Gk
	Chromaticity diagram-RGB, CMY, HSV, HLS, CIE models- Realism in rendering, Image manipulation: Illumination models, shading models for polygons, Gouraud and Phong shading , shadows, Transparency, Image Filtering, image processing, geometric Transformation of images.	
6	**Basics of Multimedia Technology**	https://www.youtube.com/watch?v=7prZ5aZt9Ow&list=PLrP-pAdcAQnunuZCS1OAWTWCDHJqjk6Gk
	• Concepts of Multimedia: Types, Data Streams, Hardware and Software Requirements and Applications, Multimedia Authoring.	
	• Digital Audio: Audio Sampling, Recording Digital Audio, Audio Standards for Multimedia Applications.	
	MIDI File Formats, MIDI Hardware and Software. Image Compression Standards: Types.	
	Video Compression and Standards: Compression Standards, MPEG Compression Basics, MPEG-1, MPEG-2, and MPEG-4	
	• Hypertext and Hypermedia	
7	**Graphics Image File Formats**	
	Raster Format,	
	Bitmap (BMP) Format,	
	Graphics Interchange Format (GIF),	
	Joint Photographic Experts Group (JPEG),	
	Tagged Image File Format (TIFF),	

	Portable Network Graphics (PNG) and their differences.	https://www.youtube.com/watch?v=7prZ5aZt9Ow&list=PLrP-pAdcAQnunuZCS1OAWTWCDHJqjk6Gk
	Computer Animation	
	• Development of Animations: Non Computer and Computer Based Animations, Different Types of Animations.	
	Flash Basics: Flash Work Flow, Animation Using Flash. The Flash Work Environment: The Stage and the Time Line,	
8	Symbols and Instances, Symbols and Interactive Movies, Using	https://www.youtube.com/watch?v=7prZ5aZt9Ow&list=PLrP-pAdcAQnunuZCS1OAWTWCDHJqjk6Gk
	the Tool Box, Using	
	Panels, Using Context Menus, Moving the Play Head, Working the Frames using time line.	
	Drawing Overview: Flash Drawing and Painting Tools, Working With Color, Using Imported Art Work, Adding Sound, Representation of Animation.	
	Using Layers: Adding and Deleting Layers, Viewing Layers. Creating Text Boxes for User input.	
	Creating Animations: Creating Key Frames, Layers in Animations, Frame Rates, Frame Rates, and Steps for creating animations. Frame by Frame Animations.	
	• Publishing and Exporting.	

Suggested link of Video lectures for Diploma (Information Technology) Students

Subject Name :Datamining & data Warehousing
Subject Code :IT 621

S. No.	Course Content	Video URL Link
1	**FUNDAMENALS OF DATA MINING**	https://www.youtube.com/watch?v=Dq5qeXkSlHQ
	Data mining	
	The history of the data mining	
	Data Mining strategies	
	Popular data mining techniques	
	Data mining applications	
	Challenges of data mining	
	The future of data mining	
2	**DATA PROCESSING AND DATA WAREHOUSING**	https://www.youtube.com/watch?v=5-C0zRlz46Y
	Data, information and knowledge	
	Types of data	
	Data warehouses	
	Data cleaning	
	Data de-normalization	
	Data transformation	
	Data quality measure	
	OLAP(Online Analytical Processing)	
	Data Sampling	
3	**WEKA AN ATTRACTIVE DATA MINING TOOL**	https://www.youtube.com/watch?v=sFS-AGnGSKQ
	Introduction	
	Installing Weka	
	Weka data file format	
	Starting Weka	
	Data Visualization	https://www.youtube.com/watch?v=leXt9bt
	Data filtering	

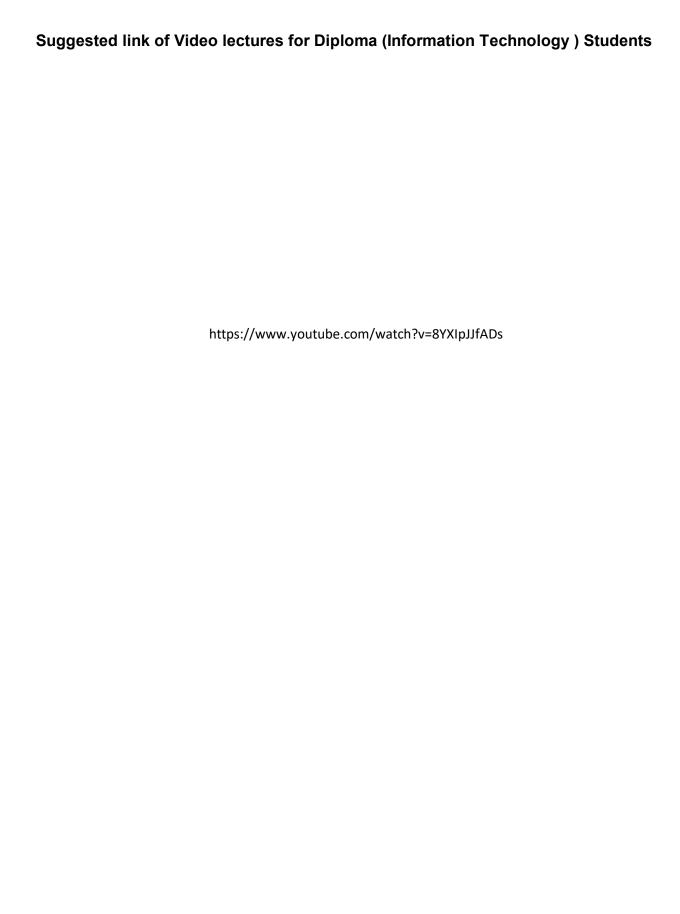|		
	Selecting Attributes	uyEY
	Data Mining with Weka	
4	**ASSOCTIATION RULE MINING** 　　Transaction data 　　Concepts of association rules 　　Relevance of association rule mining 　　Functions of association rule mining 　　Improvement and share 　　The problem of large datasets 　　Apriority algorithm 　　Strengthens and weakness of Association Rule Mining 　　Application of Association Rule Mining	https://www.youtube.com/watch?v=npFoagWd8_s
5	**THE CLUSTERING TASK** 　Introduction 　Distance Measure Types of clustering Clustering through Weka: K-Means algorithms 　Clustering Validation Strengthens and weakness of Clustering algorithms 5.6 Applications of Clustering algorithms	https://www.youtube.com/watch?v=qPL-7O7m9tA
6	**THE ESTIMATION TASK** Introduction Scatter plots and correlation Linear regression Models Logistic regression 　Regression analysis 　Strengthens and weakness of estimation Application of estimation	https://www.youtube.com/watch?v=Cc7INYdQE3Q
7	**MINING OF TIME SERIES** Introduction Fundamental of times series analysis 　Time Series models Regression Model Periodic Model Strengthens and weakness of times series analysis 　Application of times series analysis	https://www.youtube.com/watch?v=N73gCVsdJhg

Suggested link of Video lectures for Diploma (Information Technology) Students

Subject Name :Hardware Maintenance & microprocesor
Subject Code :IT

S. No.	Course Content	Video URL Link
1	**HARDWARE FUNDAMENTALS** Comparison between Hardware and Software Motherboard Central Processing Unit Memory BIOS USB Chipset, Video system, sound system, Drive system, MODEM, USB Printers	https://www.youtube.com/watch?v=bj1m786895g&list=PLc5tmHi5vIeVYCx-CDVH_Ya64TclPtPyU
2	**MOTHERBOARD** Motherboard Controllers & System Resources, Memory Mapping Interrupts Request Line (IRQ) - Purpose, Standard Assignments, Conflicts, Sharing & ISA, PCI, PnP Configuration of IRQ • System Buses - Industry Standard Organization, Micro Channel Architecture, Enhanced Industry Standard Architecture, UESA Local Bus, Peripheral Component Interconnect, Accelerated Graphics Ports, PCI-X Chipsets - Northbridge & South Bridge, Function of Chipset Motherboard form factor • Batteries - charging, rating, CMOS backup Batteries, Backup Battery replacement	https://www.youtube.com/watch?v=LeS6Psr6SaI&list=PLRaAr7ZJmXeCLf0t33s3P2xRIqfpYB3U0&index=35
3	**CENTRAL PROCESSING UNIT (CPU)** • Processor Specification - Clock Speed, FSB, L1, L2 & L3 cache, Processor over clocking • CPU - RISC & CISC Microprocessor • CPU Packaging - DIP, PGA, SPGA, MCM, LCC, PLCC & Tape Carrier Package. • Intel CPU Family - Fifth generation & Sixth Generation P6, Xeon, Celeron Processor, Intel Core i3,i5,i7 Series • AMD CPU Family - Fifth, Sixth, & Seventh Generation K Series, Athlon, Thunder bid & Duron Processor Handling & Replacement of CPU, CPU Configuration FSB, Core Speed, Core Voltage Configuration	https://www.youtube.com/watch?v=T9ttXOKsryo

4	**MEMORY** • Logical Organization of Memory - Real Mode, Protected Mode, BIOS Data Area, Upper Memory, High Memory Area, Frame Buffer. Shadow & Cache Memory Packaging - DTPP, STPP, SIMM, DIMM, RIMM RAM Types - EDO, SDRAM, VRAM, SGRM, RDRAM, DDRAM, PPRAM, DDR 1, DDR 2, DDR 3 Memory Performance - Speed, Interleaving & Caching Interfaces - IDE, ATA 1 to 6, Master Slave Configuration, SCSI, SATA, PATA. • SCSI Interface - BUS ID, Logical Unit Number, Termination, Signaling Types, SCSI Standards, Comparison between IDE & SCSI • Optical Storage Devices - CD, DVD, and Blu-ray Disc	https://www.youtube.com/watch?v=8YXIpJJfADs
5	**BIOS** BIOS Functions Cold & Warm Booting BIOS Error Codes BIOS Interrupts Identification of Different BIOS (AMI & AWARD BIOS) BIOS Memory Assignments, BIOS Advance setup	https://www.youtube.com/watch?v=4hr1a https://www.youtube.com/watch?v=G_E5 https://www.youtube.com/watch?v=YTSXJMn70gE&list=PLRaAr7ZJmXeCLf0t33s3P2xRlqfpYB3U0&index=18
6	**MAINTENANCE OF COMPUTER** Error Codes- Beep Codes, Post Codes Windows System Tools – Back Up, Disk Clean Up, Disk Defragmenter, Files and Settings Transfer Wizard, Scheduled Tasks, Security Center, System Information, System Restore • Antivirus, Firewalls and Security Tools	https://www.youtube.com/watch?v=t9AS https://www.youtube.com/watch?v=AMpszhY7v-M https://www.youtube.com/watch?v=wPxT
7	**MICROPROCESSOR ARCHITECHTURE & PERIPHERALS** Microprocessor architecture, Memory map & addresses. Input & output device, peripherals mapped I/O & memory mapped I/O. Pin out details and the function of each pin.	https://www.youtube.com/watch?v=yXg1j

	• Microprocessor communication & bus timings. 8085 m/c cycle & bus timings, control signals, memory read & writes. • Memory interfacing, basic concepts, address decoding, interfacing of 8155-memory section. • Functional block diagram, pin configuration of IC chips 8255, 8275, 8279,8237.	GBzhl4&list=PL0s3O6GgLL5cN1svnyKJrGovdK2mkLZXE
8	**MICROPROCESSOR APPLICATION** Interfacing multiplexed displays, interfacing to a matrix keyboard. A/D converter, D/A converter, stepper motor control. Comparison of 8085 to 8086,80186,80286,80386 and 80486, multicore technology.	https://www.youtube.com/watch?v=4rnNjkCflSM&list=PLZQgf2pQtimluJ6B1y8bZ9CZDQjyXya9M

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https://www.youtube.com/watch?v=8YXIpJJfADs

Suggested link of Video lectures for Diploma (Information Technology) Students

Subject Name :Linux server Administration
Subject Code :IT 602

S. No.	Course Content	Video URL Link
1	**Installing Linux as a Server**	https://www.youtube.com/watch?v=sHqrapu_Jb4&list=PLE5WvHdqqZ7R3uvjDTdruOeNydL08sNRu
	Hardware Requirements	
	Methods of installation	
	Installing Fedora	
	Installing Ubuntu	
	Software Package Management & installation of GNU software	
2	**Booting of Kernel**	https://www.youtube.com/watch?v=3kVqW0k1p0A
	Boot Loader-GRUB,LILO	
	Kernel and source code of the kernel	
	Bootstrapping	
	Kernel configuration	https://www.youtube.com/watch?v=ZFodrvKWPpo
	The init Process	
	2.6.Enabling and Disable services	
3	**System administration**	https://www.youtube.com/watch?v=3Vvl0LAYBcs
	Role of system administrator	
	Manage the users and groups	
	Monitoring the System	
	Managing drives and media	
	Creating and Editing Disk partition	
	Backup and restore files	
	Disk Usage Analyzer	
	Setting up and managing computer Network	
	Network Configuration	
	Modules and Network Interfaces	

4	Network Device Configuration utilities	https://www.youtube.com/watch?v=7UYi0h2Vuuw
	IP aliasing	
	Setting Up NIC at Boot Time	
	Managing Routes	
	Simple Usage	
	Displaying Routes	
	Static and Dynamic Routing.	
5	**Domain Name System (DNS) and File Transfer Protocol**	https://www.youtube.com/watch?v=mycOhwEqA_k
	Working principal of DNS	
	Domain and Host Naming Convention.	
	Installation of DNS Server	
	DNS Toolbox :-host, dig, nslookup, whois, nsupdate, configuring the clients	
	FTP: vsftpd, starting and testing FTP server.	
6	**Apache server**	https://www.youtube.com/watch?v=sHqrapu_Jb4&list=PLE5WvHdqqZ7R3uvjDTdruOeNydL08sNRu
	HTTP protocol.	
	Starting apache at boot time.	
	Testing the installation.	https://www.youtube.com/watch?v=sCGIwLL0CSw
	Configuring apache server.	
7	**Internet Services**	https://www.youtube.com/watch?v=sHqrapu_Jb4&list=https://www.youtube.com/watch?v=vM8cQEJFRi4
	Mail Server: SMPT, POP and IMAP basics and settings.	
	Secure Shell: Public key cryptography, OpenSSH and OpenBSD, 7.3.Network File Systems (NFS), Network Information Services(NIS)	https://www.youtube.com/watch?v=Oqxw8o66OqU
	SAMBA server.	https://www.youtube.com/wa
	LDAP, Printing, DHCP, Virtualization.	https://www.youtube.com/wa

Suggested link of Video lectures for Diploma (Information Technology) Students

Subject Name :Network Management Administration
Subject Code :IT 502

S.No.	Course Content	Video URL Link
1	Network management–definition, need and advantages. Windows NT Networking Architecture, Windows NT Operating System Design and Basics, Open Systems and Industry Standards, Client/Server Computing, Interoperating with Other Networks, Remote Access Service-Point to point protocol, Network Security and Domain Planning- Security Model Architecture, Controlling Access, User	https://www.youtube.com/watch?v=ergmDVzANVo&list=PLa9qaRTlbrkpfDF0rw8JNHuzYg0hlosaU
2	Windows NT Browser Service-Specifying Browser Computers. Browser System Roles- Non-browsers, Potential browsers, Backup browsers, Master Browser Announcements- Non-browser Announcements, Potential -browser Announcements Backup-browser Announcements. Browser Requests.	https://www.youtube.com/watch?v=ergmDVzANVo&list=PLa9qaRTlbrkpfDF0rw8JNHuzYg0hlosaU
3	Network Services: Enterprise Level-Installing and Configuring TCP/IP Installing DNS Service	https://www.youtube.com/watch?v=ergmDVzANVo&list=PLa9qaRTlbrkpfDF0rw8JNHuzYg0hlosaU
4	SNMP for Network Management-Overview of SNMP, SNMP Registry, Management Information Base, Object Identifiers, SNMP Installation, Starting and Stopping the SNMP Service, Troubleshooting SNMP	https://www.youtube.com/watch?v=ergmDVzANVo&list=PLa9qaRTlbrkpfDF0rw8JNHuzYg0hlosaU

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5	Troubleshooting Tools and Strategies- Overview of TCP/IP Troubleshooting Tools, Identify the TCP/IP Configuration by Using IPConfig ,Test Connection to the TCP/IP Network by Using Ping, Understanding Address and Name Resolution Test IP-address-to- MAC-address Resolution by Using ARP ,Understanding IP Routing for Windows NT - The Route Table, Display Current TCP/IP Connections and Statistics by Using Netstat, Using Performance Monitor ,Troubleshooting Other Connection Problems - Error 53, Cannot Connect to a Specific Server ,Troubleshooting Telnet.	https://www.youtube.com/watch?v=ergmDVzANVo&list=PLa9qaRTlbrkpfDF0rw8JNHuzYg0hlosaU
6	Remoteboot- Understanding the Remoteboot Service, The Remoteboot Process, Setting Up and Starting the Remoteboot Service ,Starting and Stopping the Remoteboot Service, Starting Remoteboot Manager, Checking the Remoteboot Installation, Managing Remoteboot Clients, Enabling Remoteboot on a Client's Hard Disk, Adding a New Client, Deleting a Client.	https://www.youtube.com/watch?v=ergmDVzANVo&list=PLa9qaRTlbrkpfDF0rw8JNHuzYg0hlosaU