	Code:	MCSEI	DAG224						Ex	aminatio	on Scher	ne
Total	umber	of Lect	ure Hou	urs: 50					Exte			4
Lootus	(I)								Inter		2	
Lectur		3	Pra	ictical (I	P) 0	1	l'utorial ((T)	0	Total	Credits	3
	e Objec				1							1
study t	he conc	ents of d	ancal, si	alistical	and com	pulation	nal challe ts to knov	nges of	ounaing	g neural i	networks	and
real-tin	ne annli	ications	md ero	ning 10 e	case stu	ties of d	leep learn	ina tock	minues	iecnniqu	es to sup	port
	ie appi	cuitons t				nes of a	eep teurn	ing ieen				
-			C	ourse C		-		-	ſ	No. of Te		lours
Dringir	les of	ANINI J-	in D	UNIT	Constraints.	·					0 Hrs	C
neural	network	ks - deep	model	Output v	vork stru	cture, P	erceptror	r's inpu	t-output	principi	es, reed	orwar
Backp	opagati	on algor	ithm: G	radient 1	Descent	(GD) N	Aomentur	n-based	GD N	esterov A	Accelerat	ed GD
Stocha	stic GD	. Vanishi	ing grad	ient prob	olem.	(00), 1	Tomenta	n oused	00,11	0010101	recordina	vu 00
New o	ptimizat	tion meth	ods: Ad	agrad, A	dadelta.	RMSpr	op, Adam					
Lands.				UNIT						1	0 Hrs	
Trainin	ig deer	p mode	s: Hyp	erparam	eters ar	nd vali	dation se	ets, Cro	oss-valio	dation, (Overfitti	ng and
		ias vs va										
							on, Early					
							ncoders,					yerwis
Pre-tra	ining, B	letter acti	ivation f			nt initial	ization m	ethods,	Batch N	and the second se		
		1.00		UNIT			a survey of the	1 Carl	No.		0 Hrs	
							CNNs, /					Layers
filters,	parame	ter sharir	ig. Popu	ilar CNN	architec	tures: A	lexNet, V	GGNet	, Google	eNet, Res	sNet	
	100			UNIT				NA SE	a lui		0 Hrs	
Sequer	ice lear	ning wit	h neura	l networ	ks, Unro	lling the	e recurre	nce, Tra	ining R	NNs - E	Backprop	agation
							M), Bidi					
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3. M 4. H To Cours 1. Exp feed Add 2. App trai gra 3. And med 4. Eval algo gen	lichael N ands-On echnique e Outco blain the dforward am optim bly deep n, and dients, a dients, a dients, a diversion chanisms duate m porithms, erative i	Nielsen, N n Machi es to Bui omes: e fundan d networ nizer. learning optimize and hyper plement s, and en nachine and del models, a	Neural N ine Lea Id Intell mental o ks, back g technic e neura rparame various coder-d learnin, monstra and Baye	letworks aming w igent Sys concepts kpropage ques suc l netwo ter tunin deep ecoder m g mode te under	and Dee vith Scik stems by of artij ation, and h as dro, rk mode rg. learning nodels for ls using standing	p Learn kit-Lear <u>Aurelie</u> ficial no d optim pout, ba ls while archite tasks in cross-	Deep Lea ing, Deter n and T <u>n Geron</u> eural net ization te atch norm e address ectures i nvolving i validation anced to	rminatio 'ensorFl works (cchnique nalizatio sing iss including images, n, ensel	(ANNs), ow 2e: (ANNs), is such n, and is uses lik g CNN sequence mble n	2015. Concep includin as gradid regulariz e overfit is and t ises, and t pethods,	ng perce ent descu ation to tting, va RNNs a ime-seria and ch	eptrons ent an design nishin nishin ttentio es data usterin
Level	of CO-P	PO Mapp	oing				0					
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· · ·				Cou	irse Tit	le: Patte	rn Reco	gnition				
Cou	rse Code	: MCSE	DAH22	4		_			E	xaminat	ion Sche	eme
Tota	l Numbe	r of Lec	ture Ho	urs: 50					Ext	ernal		54
									Inte	ernal		21
Lect	ure (L)	3	Prac	tical (P)		0 Tuto	orial (T)		0	Total C	Credits	3
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				UNI						rithms fo	10 Hrs	
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			11	n classific	cation: I	von-num	eric data	or nom	nai data	, Decisio	n nees. (AKI
1. D		Murty, M	I.N. (20							ities Press	s, Hyder	abad.
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	atistical l											
			K. Kout	roumbas,	Pattern	Recogn	ition, 4th	Ed., Aca	demicP	ress,2009).	
1. U re 2. Ap 3. D de 4. Ap m	cognition oply Baye esign and ensity esti	l fundam n tasks. ns Decisio l impleme mation m nsionalit nsionalit	on Theol ent clust eethods. y reduci n trees d	ry and sta ering alg tion techn	atistical orithms niques a	paramet , Hidden nd consti	er estima Markov ruct clas	ation for Models	designii (HMMs)	ar algebra ng classij), and noi ar and noi	fiers. nparame	etric
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2	3	3	3	2	3	1	1	1	2	1	1	2
3	3	3	3	3	3	2	2	1	2	1	1	3
N 4	3	3	3	3	3	2	2	1	2	2	1	3
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	se Code	: MCSE	CLAC22	4								on Sche	me
Total	Numbe	r of Lee	cture Ho	ours: 30						terna			36
T									-	erna			14
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1. E	Data Clea	aning an	d Prenro	ocessing		Contraction of the second					-		
	Dimensio	nality R	eduction	n using P	PCA	anuas							
	mplemer	ntation o	of Aprior	ri Algorit	thm and	FP-Gro	wth						
4. C	lassifica	ation usi	ng Deci	sion Tree	and No	aive Bay	es						
5. C	lustering	g using	k-Means	and DB	SCAN	ive Day	03						
6. T	ext Clas	sificatio	n using	NLP	oonin								
7. D	Jata Visi	alizatio	n with M	Aatplotlil	b and Se	aborn							
7. D	ssociati	ualizatio on Rule	n with N Mining	Aatplotlil using W	b and Se eka	eaborn							
7. E 8. A	ssociatio	on Rule	Mining	Antplotlil using W Logistic	eka								
7. E 8. A 9. P *This famili	redictive is only a arize stu	on Rule Model a sugges idents w	Mining ing with	using W	eka Regres ments/s	sion <i>imulatio</i>	ons. The	e instruc	etor is	enco	ourage	ed to	
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Course Codes Moor	Course Thirt Di	ata Securi	ty & Access C			ion Schen	•••
Course Code: MCSE						T	110/2011
Total Number of Lee	cture Hours: 30				ternal	36	
		1110			ernal	14	-
Lecture (L) 0	Practical (P)	4 Tu	torial (T)	0	Total	Credits	2
	J	List of Exp	periments				
Control (DAC) with Ma 2) Implement simple ac requests. 3) Simulate Attribute-B traditional ACL method 4) Analyse a real-world brief report on its effect 5) Develop a basic Role using Python. 6) Extend the RBAC sy access management. 7) Compare the behavior discuss their respective 8) Review a case study document its key featur 9) Simulate Biba's integ 10) Simulate the Clark- *This is only a suggest students with additional	cess control policio ased Access Control s. access control imp iveness. e-Based Access Con stem to include rol our of RBAC, DAC strengths and weak of a real-world RB es in a report. grity model in Pyth Wilson security model ed list of experiment	es using Pyt ol (ABAC) olementation ntrol (RBA) e hierarchie c, and MAC cnesses. AC implem on. odel using P	thon scripts, and using user attrib n (e.g., in health C) system by ma es and permissio models through tentation (e.g., in Python	outes in Py care or go apping uso n inherita simple P n a bankin	vthon, and overnment ers, roles, nce for mo ython sim g environ	l compare i and prepa and permis ore efficien sulations an ment) and	t wit nre a sion: t d

- Operating Systems: Windows, Linux (e.g., Ubuntu) .
- .
- Programming Language: Python Virtualization Tools (Optional): VirtualBox or Docker .

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Total N	umber	MCSE	LAE224						Exa	minatio	on Sche	me
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Course	Objec	tives	Practi	cal (P)	4	Tuto	rial (T)		0	Total C	redits	2
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	Coue:	MCSI	ELAF22	4					E	xaminat	ion Sche	me
total	Numbe	r of Le	cture H	lours: 30					Ext	ernal	1	36
Loctor	(T)				_	-			Int	ernal	1	4
Lectur	re (L) e Objec	0	Pract	ical (P)	4	Tutor	ial (T)		0	Total	Credits	2
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				1	list o	f Experi	ments					
1. Da	ata clean	ing and	preproc	essing using								
2. Im	plement	tation o	fclassifi	cation algor	rithms	s (e.g., De	ecision T	ree. Na	ive Ba	ves).		
				ng algorith						,,		
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5 W	eh and to	evt min	ing using			1.						
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	rse Objectiv					CC 958					
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		Course Title	: Cloud	d Computing Lab	4.0			
Course Code	: MCSEI				Ex	aminati	ion Schen	ne
		ture Hours:30			Ext	ernal	36	
	. or Dee	ture mours.co			Int	ernal	14	
Lecture (L)	0	Practical (P)	4	Tutorial (T)	0	Total	Credits	2
List of E		r ractical (r)	-	14001141(1)				

List of Experiments 1. Install Virtualbox/VMware Workstation with different flavours of linux or windows OS on

- top of windows7 or 8.Install a C compiler in the virtual machine created using virtual box and execute Simple Programs.
- 3. Install Google App Engine. Create hello world app and other simple web applications using python/java.
- 4. Use GAE launcher to launch the web applications.
- 5. Simulate a cloud scenario using CloudSim and run a scheduling algorithm that is not present in CloudSim.
- 6. Find a procedure to transfer the files from one virtual machine to another virtual machine.
- 7. Find a procedure to launch virtual machine using trystack (Online Openstack Demo Version)
- 8. Install Hadoop single node cluster and run simple applications like wordcount.

*This is only a suggested list of experiments/simulations. The instructor is encouraged to familiarize students with additional relevant exercises.

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AJ Zeer Conter to June Jose Jose 1.7

	Course Title:	Dissertat	tion-I/ Industrial Pr	oject			
CSEPI					amina	tion Scheme	
Lectu	re Hours: 30			Exter	rnal	252	
				Inter	nal	98	
6	Practical (P)	16	Tutorial (T)	0	Total Credits		14
_	Lectu	CSEPDI324 Lecture Hours: 30	CSEPDI324 Lecture Hours: 30	CSEPDI324 Lecture Hours: 30	Lecture Hours: 30 Extended Inter	CSEPDI324 Examinat Lecture Hours: 30 External Internal	CSEPDI324 Examination Scheme Lecture Hours: 30 External 252 Internal 98

Description

- In the Dissertation-I, students shall choose a specific topic/area for their dissertation and carry out
 the literature survey of the chosen area. Students are encouraged to work towards smereal-life
 problem or issue/s of societal importance in order to ensure relevant research. Each student shall
 submit a dissertation report at the end of the third semester and appear in presentation/viva voce
 before the Departmental Committee. The dissertation report should also contain the problem
 specification and milestones to be achieved in solving theproblem.
- At the beginning of the third semester, a supervisor will be assigned to each student. The Supervisor shall provide a syllabus and plan of study including relevant research papers to the student. The student shall have to maintain a proper diary reflecting the activities and progress accomplished in his/her work and update the same regularly.
- The Supervisor shall monitor the progress of the student on weekly basis. Out of the 98 marks stipulated for Internal Semester Evaluation (ISE) of the Dissertation-I, fifty percent shall be awarded on the basis of continuous assessment by the respective Supervisor, while the remaining fifty percent shall be evaluated during the presentation/viva-voce to be held before the Departmental Committee.
- The External Semester Evaluation (ESE) shall be held by an approved external examiner. The
 External Semester Evaluation (ESE) shall be of 252 marks. The break-up of ESE 252 marks shall
 be as follows:

Presentation: 20% marks Viva-voce: 40 % marks Dissertation writing based on state of art, fundamentals of the topic and its viability: 40 % marks

M

4th Semester

Course Code: M	CSEPI	01424			Ex	aminat	ion Scheme	91 - E	
Total Number of	Lectu	re Hours: 30		1	Exter	rnal	396		
		A CONTRACTOR			Inter	nal	154		
Lecture (L)	8	Practical (P)	20	Tutorial (T)	4	Total Credits			

- Dissertation-II shall commence with the fourth semester wherein a student accumulates 22 credits on successful completion of the same. This is in addition to the Dissertation-I during the third semester wherein a student shall choose a specific research topic/area and undertake its study.
- A thesis outlining the entire problem, including a survey of literature (results from Dissertation-I) and the various results obtained along with their solutions is expected to be produced by each student. A Thesis Committee shall check the thesis for its completeness. A soft copy of the thesis in PDF format (in specific style) should be sent to the Thesis Committee, before its final submission. The Thesis Committee can recommend for modifications of the thesis or offer suggestions for improvement of the same for resubmission The Thesis committee shall also examine for suitability of publication (including any possible plagiarism) before the thesis goes in print and for binding.
- Consequent to the thesis being accepted and approved by the Thesis Committee, the Viva-voce
 examination of the student shall be conducted by an approved Examiner. Thecandidates who fail to
 submit the dissertation work within the stipulated time have to submit the same at the time of next
 ensuing examination.
- Out of the 154 marks stipulated for Internal Semester Evaluation (ISE) of the Dissertation-II, fifty
 percent shall be awarded on the basis of continuous assessment by the respective Supervisor, while
 the remaining fifty percent shall be evaluated during the presentation/viva-voce to be held before the
 Departmental Committee. Out of the 396 marks stipulated for the External Semester Evaluation
 (ESE), fifty percent marks shall be awarded on the basis of viva-voce and fifty percent marks for
 general evaluation of thesis