

**ANNUAL REPORT-(2021-22)**  
**(01.07.2021 TO 30.06.2022)**  
**DEPARTMENT OF COMPUTER SCIENCE & ENGG.**

- (i) **Name** : COMPUTER SCIENCE & ENGG.
- (ii) **Year of Establishment:** 1995
- (iii) **(a) Vision** : The vision of the Department is to become a centre of excellence for education in Computer Science, Engineering and Applications. We visualize ourselves as an agency to nurture young minds into leaders of tomorrow in the field of higher education, research and development, and corporate world. We aim to produce creators and innovators who will work towards the overall well-being of the society.
- (b) Mission** :
- To impart state-of-the-art knowledge in Computer Science and Engineering, Information Technology and Computer Applications.
  - To ensure our students graduate with a sound theoretical basis and wide-ranging practical experience.
  - To foster linkages between the Department and public and private sectors, traversing research establishments as well as Information Technology industry.
  - To promote ethical research of high quality.
  - To adopt the best pedagogical methods in order to maximize knowledge transfer.
  - To inculcate a culture of free and open discussions in the Department.
  - To engage students in learning, understanding and applying novel ideas.
  - To infuse scientific temper, professionalism, enthusiasm and team spirit.
  - To inspire a zest into students for lifelong learning.
  - To promote democratic values, an environment of equal opportunity for everyone irrespective of gender, religion and cast.
  - To attract and retain the talented and dedicated teaching and supporting staff, and students.

**(c) Objectives :** To facilitate and promote studies and research in emerging areas of Information Technology and Computer Engineering to achieve excellence in these fields.

**IV) Programme (s) Offered in the Deptt:**

Course	Sanctioned intake	Present Strength (Total)
Ph. D	As per availability	128
P.G (MCA & M Tech)	MCA-60 M Tech CSE-30	116+31 = 147
U.G. (B Tech CSE)	B Tech CSE-120+24*	135 + 153 + 142 + 142 = 572
U.G. (B Tech IT)	B Tech IT-60+12*	70 + 76 +75 +75 = 296
U.G. (B Tech AI & ML)	B Tech AI & ML -60+12*	71 + 80 = 151
Any other: Through Distance Mode BCA, PGDCA, MSc. Computer Science, MCA and MCA 5 year Integrated	To be obtained from DE	To be obtained from DE

\*LEET

**(V) Faculty detail**

**(Attach a list of the Faculty alongwith their qualifications and Experiences)**

	Sanctioned	Direct filled	Under CAS	Remarks if any
<b>Professor</b>	<b>6</b>	<b>0</b>	<b>10</b>	
<b>Associate Professor</b>	<b>12</b>	<b>5</b>	<b>8</b>	
<b>Assistant Professor</b>	<b>24</b>	<b>20 +1 ^</b>	<b>---</b>	

^On Deputation From CDLSIET

**Regular Faculty Details**

Sr. No .	Name (s) of the Teaching Faculty	Designation	Qualificati on	Experience (in years)	Aadhar No.	PAN No.	H. Index (Scopus Based)
1	Prof. Dharminder Kumar	Professor	Ph.D.	31	239089902125	ABFPK5190H	6
2	Prof.Saroj	Professor/ Dean FET	Ph.D.	24	931206527207	ADCPS6744C	8
3	Prof. Yogesh Chaba	Professor	Ph.D	25	236069072598	ABXPC4719N	7
4	Prof.Pardeep Bhatia	Professor	Ph.D	28	679569339054	ABSPK0744J	7

5	Prof. Rishi Pal Singh	Professor	Ph.D	22	739273315871	AMOPS6526M	5
6	Prof. Dharmender Kumar	Professor/ Chairman	Ph.D	18	666516797640	AKUPK2864N	
7	Prof. Om Prakash Sangwan	Professor	Ph.D	17	532941773117	BAFPS9422J	7
8	Prof. Sanjeev Kumar	Professor	Ph.D	17	464367608598	AMEDK8131G	
9	Prof. Jyoti	Professor	Ph.D	16	643446335138	AASPV3228R	3
10	Dr. Sunila	Professor	Ph.D	15	627133340377	AKIPG3723G	
11	Prof. Ritu	Associate Professor	Ph.D	15	894084915697	ALMPM1076F	
12	Dr. Sunil Nandal	Associate Professor	Ph.D	15	247902660918	AEJPN7499F	
13	Prof. Jaswinder Singh	Associate Professor	Ph.D	17	626467081218	BDJPS4624P	
14	Dr. Jai Bhagwan	Assistant Professor	Ph.D	9	358940769992	BIRPB5097A	
15	Mr. Narender	Assistant Professor	M.Tech	13	698546657265	BYLPK8244A	
16	Dr. Amandeep	Assistant Professor	Ph.D	12	507905484461	AYFPA3186L	
17	Mr. Manoj	Assistant Professor	M.Tech	9	419867828438	CADPK3098R	
18	Dr. Abhishek Kajal	Assistant Professor	Ph.D	12	471250008111	AYYPK8183G	2
19	Dr. Sakshi Dhingra	Assistant Professor	Ph.D	8	453298837928	CAYPD8849J	2
20	Dr. Anju	Assistant Professor	Ph.D	8	273437329627	APUPA9671A	2
21	Dr. Sunita	Assistant Professor	Ph.D	16	676448974943	ADVPG4092R	

22	Dr. Deepak Nandal	Assistant Professor	Ph.D	9	405004378020	ANNPN6648K	1
23	Mr. Sunil Kumar	Assistant Professor	M.Tech	8	496138060190	CELPK2181R	
24	Mr. Krishan Kumar Ranga	Assistant Professor	M.Tech	22	506587087516	AGRPR7759J	
25	Dr. Seema (On Deputation)	Assistant Professor	Ph.D	17	921408831590	ABTPY1835B	
26	Dr. Sunil Kumar	Assistant Professor	Ph.D	17.5	904540568045	ALOPK3967 D	

**(VI) Office/Tech. staff detail:**

Title of Position	Sanctioned Strength	In Position Strength
System Manager	1	1
Programmer	1	1
Supdt.	1	NIL
Dy.Supdt.	2	1
Tech Asst – I	2	2
Sr. Hardware Technician	-	NIL
Asst	5	3
Sr. Scale Stenographer	1	NIL
JLA	2	NIL
Lab Tech	3	1+1*
Steno Typist	3	NIL
Clerk cum JDEO	5	2+1*
Lab-Attendant	8	8
Peon	4	1+2*

**\*on contract through contractor**

**VII) a) Students detail in respect of M.Sc., M.Tech., M.Pharm., M.Ph.Th., M.Com., MBA and MCA Programmes**

<i>Programme</i>	<i>Sanctioned Intake</i>	<i>Students admitted 1<sup>st</sup> Year</i>	<i>Students Present in Final Year</i>
M.Tech (CSE)	30	12	19
MCA	60	59	57

**(b) Students detail in respect of B.Tech, B.Pharm. and B.P.Th. Programmes****B.Tech (CSE)**

1 <sup>st</sup> year		2 <sup>nd</sup> year		3 <sup>rd</sup> year	4 <sup>th</sup> year
<i>Sanctioned Intake</i>	<i>Students admitted</i>	<i>Sanctioned intake through LEET</i>	<i>Students Present</i>	<i>Students Present</i>	<i>Students Present</i>
120	135	120 +12	153	142	142

**B.Tech (I.T.)**

1 <sup>st</sup> year		2 <sup>nd</sup> year		3 <sup>rd</sup> year	4 <sup>th</sup> year
<i>Sanctioned Intake</i>	<i>Students admitted</i>	<i>Sanctioned intake through LEET</i>	<i>Students Present</i>	<i>Students Present</i>	<i>Students Present</i>
60	70	60 + 6	76	75	75

**B.Tech (AI & ML)**

1 <sup>st</sup> year		2 <sup>nd</sup> year		3 <sup>rd</sup> year	4 <sup>th</sup> year
<i>Sanctioned Intake</i>	<i>Students admitted</i>	<i>Sanctioned intake through LEET</i>	<i>Students Present</i>	<i>Students Present</i>	<i>Students Present</i>
60	71	60 + 6	80	--	--

**(c) Detail of Foreign Students, if any, admitted in the Department:**

Sr. No.	Name of Programme	No. of students Admitted	Name of Country

**(VIII) Research Scholars: Attach a separate list (Reg. No, Name, Name of Supervisor/Co-Supervisor)**

<b>Total no. of Ph.D. students</b>	<b>Registered during the year</b>	<b>Thesis submitted during the year</b>	<b>Thesis Awarded During the year</b>
85 + 10 = 95	10	07	07

**List of Pre. PH.D 2021-22 Students**

<b>Sr. No.</b>	<b>Roll No.</b>	<b>Name</b>	<b>Father's name</b>	<b>Guide/Supervisor Name</b>
1	200010090117	Jyotsana	Janak Raj	Dr. Sunil Kumar/ Dr. Dharminder Kumar
2	200010090118	Suman	BaljeetPanghal	Dr. Sunil Kumar
3	200010090119	ReetuKumari	Rajpal	Dr. Sunil Kumar
4	200010090120	Ekta	Satyaveer	Dr. Sunil Kumar
5	210010090101	Udita Malhotra	Rakesh Malhotra	Dr. RituNagpal
6	210010090102	Umesh	Rampal	Dr. Sunil Kumar
7	210010090103	Sonu Devi	Kulwant Singh	Prof. Dharmender Kumar
8	210010090104	Monika	Shishpal	Prof. Rishi Pal Singh
9	210010090105	Kulbir Kumar	Man Singh	Dr. Amandeep
10	210010090106	Gobind Kumar	Rajinder Kumar	Dr. Amandeep

**(IX) Sponsored Research/ Consultancy Projects:****(a.)**

<b>Total no. of Projects in Progress during the academic current year</b>	<b>Total No. of Projects awarded during the academic current year</b>	<b>Total No. of Projects Completed during the academic current year</b>
<b>04</b>	<b>--</b>	<b>--</b>

**(b.)**

<b>Title of the Project</b>	<b>Name of the Investigator(s)</b>	<b>Status: Completed/In Progress</b>	<b>Nature: Research/ Consultancy</b>	<b>Month &amp;Year of award</b>
Detection of Brain Tumor from MRI Images and its Classification	Prof. O.P. Sangwan	In Progress	Research	---
IOT Based Patient Tracking & Monitoring System	Prof. Dharmender Kumar	In Progress	Research	---
Crime Investigation Management Tool	Prof. O.P. Sangwan	In Progress	Research	---
Aatm-Nirbhar Teaching Plateform	Dr. Amandeep	In Progress	Research	---

**X) Number of Publications of Faculty (in Total)**

<b>Books</b>	<b>Research papers</b>		<b>Research paper</b>		<b>Other Articles</b>
	<b>SCI/Scopus</b>	<b>UGC Care</b>	<b>Refereed</b>	<b>Non refereed</b>	
02	35	12	47	--	--

**(XI) Faculty wise detail of publication during the academic year:****a) Books/Book Chapters/ Monograph etc.**

Authors	Title	Year of publication	Type of books(Text /Reference /Report)	Publishers
S. Ratnoo	Impact of Socio-economic Factors on Students' Academic Performance: A Case Study of Jawahar Navodaya Vidyalaya	16-18 Dec., 2021	Book Chapter	11th World Congress on Information and Communication Technologies
Jaswinder Singh	Internet of Things and its Relevance in Integration and Implementation of the Internet of Things through Cloud Computing.	2021	Book Chapter	IGI Global

**b) Research Papers/ Articles in Journals**

Sr. No.	Authors	Year	Title of paper	Name of journal	Publis hers	Vol. & No.	Pages	SCI/S copus (Yes/ No)	Im pa ct fac tor
1.	Yogesh Chaba	Sep-21	Deep Q-network based fog node offloading strategy for 5 G vehicular Adhoc Network	Ad Hoc Networks	Scopus	ISSN 1570-8705		Yes	
2.	Saroj Ratnoo	2022	An Optimal Random Forest Classifier for Diagnosing Covid-19 from X-ray and CTscan Images	Journal of Scientific Research		vol. 66, no. 02	189-197	No	
3.	Saroj Ratnoo	Oct 2021	Multi-objective hyperparameter tuning of classifiers for disease diagnosis	Indian Journal of Computer Science and Engineering,		vol. 12, no. 5	1334-1352	Yes	
4.	Saroj Ratnoo	Dec 2022	Predicting student dropouts using random forest	Journal of Statistics and Management Systems	Taylor & Francis	vol 25,		Yes	
5.	Saroj Ratnoo	June 2022	Test Case Prioritization, Selection, and Reduction Using Improved	Sensors		Vol. 22		Yes	



			Quantum-Behaved Particle Swarm Optimization						
6.	Saroj Ratnoo	2022	Fine Tuning CNN for COVID-19 Patterns Detection from Chest Radiographs	International Journal of Reliable and Quality E-Healthcare (IJRQEH)	IGI Global	11 (4)		Yes	
7.	Pradeep Kumar Bhatia	Jul-21	Optimized Component based Selection using LSTM Model by Integrating Hybrid MVO-PSO Soft Computing Technique	Advances in Science, Technology and Engineering Systems Journal	Scopus	ISSN: 2415-6698		Yes	
8.	Pradeep Kumar Bhatia	Sep-21	Software Fault Prediction using Lion Optimization Algorithm	International Journal of Information Technology (IJIT)	Scopus	ISSN: 2511-2104		Yes	
9.	Pradeep Kumar Bhatia	Sep-21	Hybrid Maintainability Prediction using Soft computing Techniques	International Journal of Computing	scopus	ISSN 1727-6209 (Print ) ISSN 2312-5381		Yes	
10.	Pradeep Kumar Bhatia	Sep-21	To Provide Machine Learning based Medical Image Analysis and Feature Extraction Scheme for Practitioners	INTERNATIONAL JOURNAL OF ENGINEERING RESEARCH & TECHNOLOGY (IJERT)	Google Scholar	2278-0181		No	
11.	Rishi Pal Singh	18 Nov. 2021	An Enhanced Naked Mole Rat Algorithm for Optimal Cross-Layer Solution for Wireless Underground Sensor Networks	Mathematics	MDPI	9 & Issue -22	2942	Yes	----
12.	Rishi Pal Singh	26-May 2022	Energy-Efficient Deterministic Approach for Coverage Hole Detection in	Computers	MDPI	11 & Issue -6	86	Yes	

			Wireless Underground Sensor Network: Mathematical Model and Simulation						
13.	Rishi Pal Singh	4-July-2021	IoV based intelligent vehicle tracker using FoG computing with supervised machine learning techniques	Journal of Discrete Mathematical Sciences and Cryptography	Taylor & Francis	24 & Issue-5	1393-1413	Yes	
14.	Rishi Pal Singh	31-Dec-2021	A survey on holes problem in wireless underground sensor networks	IEEE Access	IEEE	Vol. 10	7852-7880	Yes	
15.	Rishi Pal Singh	1-Jan. 2022	An optimal energy-throughput efficient cross-layer solution using naked mole rat algorithm for wireless underground sensor networks	Materials Today: Proceedings	Elsevier	Vol. 48	1076-1083	Yes	
16.	Rishi Pal Singh	2021	A Soft Computing Technique to Optimize Energy Consumption in Wireless Sensor Networks	Lecture Notes in Networks and Systems	Springer, Singapore	204	475-487	Yes	-
17.	Rishi Pal Singh	Jan 2022	Crop-Suitability Analysis Using the Analytic Hierarchy Process and Geospatial Techniques for Cereal Production in North India	Sustainability	MDPI	14 & Issue-9	5246	Yes	
18.	Dharmender Kumar	Aug-21	IMGWO Based ANN: A New Heart Disease Diagnosis Model to Classify Real World Dataset.	Indian Journal of Computer Science and Engineering	Scopus	ISSN-0976-5166		Yes	
19.	Dharmender Kumar	2021	Disease Single nucleotide	Journal of Physics	IOPScience			No	

			Polymorphism selection using Hybrid Feature Selection technique.						
20.	Dharmender Kumar	2022	Meta-heuristic techniques to train artificial neural networks for Medical Image Classification: A review	Ingenta Connect	Bentham Science Publishers	Vol. 15 (4)	513-530	Yes	
21.	Dharmender Kumar	2022	Machine learning based Heart disease diagonals using Non-Invasive Methods: A review	Journal of Physics	IOPScience			No	
22.	Dharmender Kumar	2022	Hyperspectral Image Classification using Deep Learning Models: A review	Journal of Physics	IOPScience			No	
23.	Om Prakash Sangwan	Oct-21	Discrete Cuckoo Search Algorithms for Test Case Prioritization	Applied Soft Computing	Scopus	ISSN-2666-2221		Yes	
24.	Sanjeev Kumar,	Dec-21	“Evaluation of handover effectiveness with progressive user behavior in self-organized LTE networks	Journal of Discrete Mathematical Sciences and Cryptography,	Web of Science	ISSN-0972-0529		Yes	
25.	Sanjeev Kumar	Jul-21	Independent Task Scheduling in Cloud Computing using Meta-Heuristic HC-CSO Algorithm	International Journal of Advanced Computer Science and Applications	Scopus	ISSN-2156-5571		Yes	
26.	Sanjeev Kumar	Jul-21	An H-CSO Algorithm for Workflow Scheduling in Heterogeneous Cloud Environment	International Journal of Intelligent Engineering and Systems	Scopus	ISSN-2185-3118		Yes	
27.	Jyoti Vashishtha	Aug-21	A Novel Hybrid Grey Wolf Optimization Algorithm using	Computación y Sistemas	Scopus	ISSN-2007-9737		Yes	

			Two-Phase Crossover Approach for Feature Selection and Classification						
28.	Jaswinder Singh, Kirti	2021	Exploring the Potential of Machine Learning and Artificial Intelligence in HealthCare	Journal of the Maharaja Sayajirao University of Baroda	Maharaja Sayajirao University of Baroda	0025-0422, Vol.55, No.1 July 2021	pp. 15-21	No	- --
29.	Jaswinder Singh, Mikanshu	2021	Potential of Machine Learning and Deep Learning for Mining the Opinions	Journal of the Maharaja Sayajirao University of Baroda	Maharaja Sayajirao University of Baroda	0025-0422, Vol.55, No.1 July 2021	pp.38-41	No	- --
30.	Jaswinder Singh, Neha	2021	Utilization of Machine Learning Models for Disease Prediction	International Journal of IT and Knowledge Management	Computer Science Journals	0973-4414, Vol.15, Issue 1, Aug 2021	pp. 23-28	No	- --
31.	Jaswinder Singh	2021	Overview of Tools and Applications of Machine Learning in Healthcare	International Journal of Computer Science & Communication	Computer Science Journals	0973-7391, Vol.13, Issue 1, March 2022.	46-51	No	- --
32.	Jaswinder Singh, Neha	2021	A Relative Study of Heart Disease Prediction using Machine Learning Techniques	International Journal of IT and Knowledge Management	Computer Science Journals	0973-4414, Vol.15, Issue 2, June 2022	pp. 57-62	No	--
33.	Jai Bhagwan	Jul-21	Independent Task Scheduling in Cloud Computing using Meta-Heuristic HC-CSO Algorithm	International Journal of Advanced Computer Science and Applications	Scopus	ISSN-2156-5571		Yes	
34.	Jai Bhagwan	Jul-21	An H-CSO Algorithm for Workflow Scheduling in Heterogeneous	International Journal of Intelligent Engineering and Systems	Scopus	ISSN-2185-3118		Yes	

			Cloud Environment						
35.	Amandeep	2022	Multi-User MIMO & Beam Forming with Carrier Aggregation for LTE- Advanced System	Materialstoday Proceedings	Scopus	Volume 65, Part 8	Pages 3590-3595	Yes	
36.	Manoj	Dec-21	“Evaluation of handover effectiveness with progressive user behavior in self-organized LTE networks,	Journal of Discrete Mathematical Sciences and Cryptography,	Web of Science	ISSN-0972-0529		Yes	
37.	Narender Kumar	2022	Machine learning based Heart disease diagonals using Non-Invasive Methods: A review	Journal of Physics	IOPScience			No	
38.	Narender Kumar	Aug-21	IMGWO Based ANN: A New Heart Disease Diagnosis Model to Classify Real World Dataset.	Indian Journal of Computer Science and Engineering	Scopus	0976-5166		Yes	
39.	Anju	2021	A Soft Computing Technique to Optimize Energy Consumption in Wireless Sensor Networks	Lecture Notes in Networks and Systems	Springer , Singapore	204	475-487	Yes	-
40.	Manoj	Dec-21	“Evaluation of handover effectiveness with progressive user behavior in self-organized LTE networks,	Journal of Discrete Mathematical Sciences and Cryptography,	Web of Science	ISSN-0972-0529		Yes	
41.	Sunil Kumar	2022	An Optimal Random Forest Classifier for Diagnosing Covid-19 from X-ray and CTscan Images	Journal of Scientific Research		vol. 66, no. 02	189-197	No	
42.	Sunil Kumar	Oct 2021	Multi-objective hyperparameter tuning of	Indian Journal of Computer Science and Engineering,		vol. 12, no. 5	1334-1352	Yes	

			classifiers for disease diagnosis						
43.	Sunil Kumar	Apr-22	Evaluating the Performance of Various SVM Kernel Functions Based on Basic Features Extracted from KDDCUP'99 Dataset by Random Forest Method for Detecting DDoS Attacks	Wireless Personal Communications	Scopus	0929-6212, 1572-834X		Yes	
44.	Krishan Kumar Ranga	2022	Extensive Review of Comparative Study of OSPF, RIP and EIGRP Routing Protocols based on Quantitative Metrics	International Conference on Smart Technology, Artificial Intelligence and Computer Engineering (ICSTAICE)	Institute Of Research And Journals	IR-AICE - DEL H-24072 2-461  ISBN: 978-93-90150-31-1.	18-22	Yes	--
45.	Dr. Sunil Kumar	2022	Evaluating the Performance of Various SVM Kernel Functions Based on Basic Features Extracted from KDDCUP'99 Dataset by Random Forest Method for Detecting DDoS Attacks.	Wireless Personal Communications	SCI	123(4), 3127-3145	SCI Indexed	Yes	
46.	Dr. Sunil Kumar	2022	IoT Security on Smart Grid: Threats and Mitigation Frameworks. ECS Transactions		Scopus	107(1), 14623 .		Yes	
47.	Anupma	2021	A Soft Computing Technique to Optimize Energy Consumption in Wireless Sensor Networks	Lecture Notes in Networks and Systems	Springer , Singapore	204	475-487	Yes	-

**(XII) Participation of faculty in Seminars/Conferences/Workshops and refresher courses etc. during the period:**

**(a) Total Number of Seminars/ Conferences attended by faculty and papers presented**

Positions	Attended			Papers presented		
	International	National	Total	International	National	Total
Professor,	--	--	--	5	--	--
Associate Professor	--	--	--	2	--	--
Assistant Professor	3	--	--	3	--	--

**(b) International Conferences/ Seminars/ Workshops:**

Sr. No.	Name of the Teacher/ Faculty	Title of paper presented	Theme of conference/ Seminar	Name of Host organization	Place	Dates	Funded by UGC/DST CSIR/AICTE/ Univ./etc.
1.	Dharminder Kumar	A review on Quality of Image during CBIR operations and Compression	In Book: SCRS Conference Proceedings on Intelligent System	DOI: 10.52458/978-93-91842-08-6-19			
2.	Yogesh Chaba	Analysis of different Resource Allocation Techniques used in 5G Mobile Networks	13th International Conference on Advances in Computing, Control, and Telecommunication Technologies, ACT 2022	ACT 22	Hyderabad	27-28 June 2022	
3.	Saroj Ratnoo	Convolutional Neural Network for Covid-19 detection from X-ray images	Fourth International Conference on Computational Intelligence and Communication Technologies (CCICT) pp. 100-104	(CCICT) DOI 10.1109/CICT53244.2021.00030, (Indexed by IEEE)		July, 2021	

4.	Saroj Ratnoo	Population-Based Meta-heuristics for Feature Selection: A Multi-objective Perspective	Proceedings of International Conference on Data Science and Applications,( ICDSA 2022)	( ICDSA 2022) Volume 11, Springer SBN978-981-19-6630-9		2021	
5.	Dharmender Kumar	Feature Selection techniques for Genomic data	International Conference	IEEE		2022	
6.	Jaswinder Singh	A Comparative Analysis of Predictive Machine Learning Algorithms for Chronic Kidney Disease	International Conference on Computational Performance Evaluation (ComPE)	Deptt. of Bio-Medical Engg., North-Hill University, Shillong, Meghalaya	Shillong , Meghalaya	1-3 Dec., 2021	
7.	Jaswinder Singh	A Comprehensive study of Disease Prediction using Machine Learning	International Conference on Computer Science and Information Technology	International Society for Scientific Research and Development	Dispur, Assam	1 June 2022	
8.	Amandeep	Performance analysis of Support Vector Machine learning based career aggregation resource scheduling in 5G	ICMLDE	UPES	Dehradun	2022	
9.	Amandeep	Analysis of different Resource Allocation Techniques used in 5G Mobile Networks	13th International Conference on Advances in Computing, Control, and Telecommunication Technologies, ACT 2022	ACT 22	Hyderabad	27-28 June 2022	
10.	Sakshi Dhingra	A review on Quality of Image during CBIR operations and Compression	In Book: SCRS Conference Proceedings on Intelligent System	DOI: 10.52458/978-93-91842-08-6-19			



**(c) National Conferences/ Seminars/ Workshops:**

Name of Teacher/ Faculty	Title of paper presented	Theme of conference/ Seminar	Name of Host organization	Place	Dates	Funded by UGC/DST CSIR/AICTE /Univ./etc.
Anupma Sangwan	-	AICTE Online sponsored Faculty Development Programme on "Information and Cyber Security"	Department of Computer Science & Engineering, GJUS&T	Hisar, Haryana	27.09.2021 to 02.10.2021	
Anupma Sangwan	-	AICTE sponsored Online Faculty Development Programme on "Artificial Intelligence & Machine Learning"	Department of Computer Science & Engineering, GJUS&T	Hisar, Haryana	07.02.2022 to 12.02.2022	
Anupma Sangwan	-	Workshop on "Outcome Based Education"	UGC-HRDC & IQAC, GJUS&T	Hisar, Haryana	17.11.2021	

**(d) Regional/ State Level Conferences/ Seminars/ Workshops:**

Name of Faculty	Title of paper presented	Theme of Conference/ Seminar	Name of Host organization	Place	Dates/ Duration	Funded by UGC/DST CSIR/AICTE /Univ./etc.

**(e) Refresher Courses/ Orientation Courses:**

Sr. No.	Name of Teacher/Faculty	Title of Refresher Course	Host organization	Dept.	University	Place	Date
1.	Saroj Ratnoo	FDP on Inculcating Universal Human Values in Technical Education	Online by AICTE	AICTE	Online	Online	21 to 25 Feb. 2022.

2.	Jaswinder Singh	Information and Cyber Security	GJUST, Hisar	Department of Computer Sc. & Engg.	GJUST, Hisar	Hisar, Haryana	27th Sept. - 2nd Oct, 2021
3.	Jaswinder Singh	Information Sources & Learning in Digital Age: Challenges and Prospects	GJUST, Hisar	Dr. Bhim Rao Ambedkar Library	GJUST, Hisar	Hisar, Haryana	8Nov.- 13Nov. 2021
4.	Jaswinder Singh	Artificial Intelligence and Machine Learning	GJUST, Hisar	Department of Computer Sc. & Engg.	GJUST, Hisar	Hisar, Haryana	7th Feb - 12 Feb, 2022
5.	Jaswinder Singh	Recent Trends & Advancements in Computer Science	SS College of Engg., Udaipur	Department of Computer Sc. & Engg.	SS College of Engg., Udaipur	Udaipur, Rajasthan	7th March - 11 March, 2022
6.	Jaswinder Singh	Holistic Development and Outcome based Education in light of NEP-2020	University of Engineering and Management (UEM), Jaipur	University of Engineering and Management (UEM), Jaipur	University of Engineering and Management (UEM), Jaipur	Jaipur, Rajasthan	13th June - 19th June, 2022
7.	Jaswinder Singh	Recent Advances in Computer Science and Allied Domains	Sharda University	Department of Computer Sc. & Engg.	Sharda University	Greater Noida, Uttar Pradesh	20th June - 25th June, 2022
8.	Amandeep	Information Sources & Learning in Digital Age: Challenges and Prospects	GJUST, Hisar	Dr. Bhim Rao Ambedkar Library	GJUST, Hisar	Hisar, Haryana	8Nov.- 13Nov. 2021
9.	Amandeep	Artificial Intelligence and Machine Learning	GJUST, Hisar	Department of Computer Sc. & Engg.	GJUST, Hisar	Hisar, Harana	7th Feb - 12 Feb, 2022
10.	Sakshi Dhingra	Artificial Intelligence and Machine Learning	GJUST, Hisar	Department of Computer Sc. & Engg.	GJUST, Hisar	Hisar, Haryana	7th Feb - 12 Feb, 2022
11.	Sakshi Dhingra	Hyper-spectral Remote Sensing and its application	AICTE Training and Learning Academy (ATAL)	Department of Electronics and Communication Engineering	CMR institute of Technology	AICTE Training and Learning Academy (ATAL)	06 to 10 September, 2021
12.	Sakshi Dhingra	Recent Trends and Applications	AICTE Training and Learning	Department of Electronics and	PSCMR College of Engineering	AICTE Training and	13 to 17 September, 2021

		of GIS & Remote Sensing using AI	Academy (ATAL)	Communication Engineering	& Technology	Learning Academy (ATAL)	
13.	Sunil Kumar	Blockchain assisted Federated Machine Learning for Securing Big Data Analytics and IoT	Dr B R Ambedkar National Institute of Technology	Department of Information Technology	Dr. B R Ambedkar National Institute of Technology	Jalandhar	08-04-2022 to 12-04-2022
14.	Sunil Kumar	Information & Cyber Security	GJUST Hisar	Department of Computer Science and Engineering	GJUST Hisar	Hisar	27-09-2021 to 02-10-2021
15.	Sunil Kumar	Machine Learning in Medical Image Processing	Katihar Engineering College Katihar	(ATAL) Academy Online Elementary FDP	Katihar Engineering College Katihar	Kaithar	05/09/2021 to 09/09/2021
16.	Sunil Kumar	Information Sources & Learning in Digital Age: Challenges and Prospects	GJUST, Hisar	Dr. Bhim Rao Ambedkar Library	GJUST, Hisar	Hisar, Haryana	8Nov.-13Nov. 2021
17.	Sunil Kaushik	Python Programming for 5G Communications	Department of Electronics and Communication Engineering,	MLR Institute of Technology, Dundigal, Telangana	MLR Institute of Technology, Dundigal, Telangana	Telangana	14-02-2022 to 22-02-2022
18.	Sunil Kaushik	Artificial Intelligence and Machine Learning	GJUST, Hisar	Department of Computer Sc. & Engg.	GJUST, Hisar	Hisar, Haryana	7th Feb - 12 Feb, 2022
19.	Krishan Kumar Ranga	Information and Cyber Security	GJUST, Hisar	Department of Computer Sc. & Engg.	GJUST, Hisar	Hisar, Haryana	27th Sept. - 2nd Oct, 2021
20.	Krishan Kumar Ranga	Information Sources & Learning in Digital Age: Challenges and Prospects	GJUST, Hisar	Dr. Bhim Rao Ambedkar Library	GJUST, Hisar	Hisar, Haryana	8Nov.-13Nov. 2021
21.	Krishan Kumar Ranga	Artificial Intelligence and Machine Learning	GJUST, Hisar	Department of Computer Sc. & Engg.	GJUST, Hisar	Hisar, Haryana	7th Feb - 12 Feb, 2022
22.	Krishan Kumar Ranga	Machine Learning using R	NITTTR, Sec-26, Chandigarh.	Department of Computer Sc. & Engg.	NITTTR, Sec-26, Chandigarh.	NITTTR, Sec-26, Chandigarh.	21.02.2022 to 25.02.2022

23.	Krishan Kumar Ranga	COURSE DEVELOPMENT FOR MODERN CLASS ROOMS: APPROACHES AND STRATEGIES	Academic Partners Department of Journalism & Mass communication	Department of Journalism & Mass communication.	CDLU, Sirsa	CDLU, Sirsa	March (05-06), 2022
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**(f) National/International Webinars Attended**

Sr. No.	Name of Teacher/Faculty	Title of webinar	Name of Host organization	Dates
1.	Anupma Sangwan	Webinar on "How Social is Social Media?"	UGC-HRDC, GJUS&T, Hisar, Haryana	27.07.2021

**(g) Total number of Refresher/ Orientation Course/Webinar attended:**

- i) Refresher Course : 23  
 ii) Orientation Course : --  
 iii) Webinar : 01  
 iv) Total : 24

**(XIII) Association with National and State Level Bodies  
(Give Faculty-wise details):**

**i) Membership of Professional Bodies:**

Prof. Dharminder Kumar	<ul style="list-style-type: none"> <li>Life member of Computer Society of India</li> <li>Member, IAENG (ID. No. 111174)</li> <li>Member, SPSTI (ID. No. LM1034)</li> </ul>
Prof. Pradeep Kr. Bhatia	<ul style="list-style-type: none"> <li>Review a manuscript for Global Journal of Research and Review.</li> <li>Review a manuscript for International Journal of Statistic and Reliability Engineering (IJSRE)</li> <li>Review a Manuscript for Advances in Science, Technology and Engineering Systems Journal(ASTIST)</li> </ul>
Dr. O.P. Sangwan	<ul style="list-style-type: none"> <li>Life Member, Computer Society of India, India. (Membership No. 01083699)</li> <li>Member, IACSIT (International Association of Computer Science and Information Technology, USA (Membership No. 80331424)</li> <li>Member, Computer Science Teacher Association, New York, USA (Membership No. 4711935)</li> <li>Member, International Association of Engineers (IAENG), Hong Kong (Membership No. 123697)</li> </ul>

	<ul style="list-style-type: none"> <li>• Member, IACSIT (International Association of Computer Science and Information Technology, USA (Membership No. 80331424)</li> <li>• Reviewer, Internal Journal of Expert Systems with Applications or its Open Access Mirror, Elsevier.</li> <li>• Reviewer, Advances in Science, Technology and Engineering Systems Journal (ASTES), UK and United States.</li> <li>• Reviewer, Journal of King Saud University - Computer and Information Sciences, Elsevier.</li> <li>• Reviewer, Computer Methods and Programs in Biomedicine, Elsevier.</li> <li>• Reviewer, SN Applied Science (SNAS), Springer Nature.</li> </ul>
Jaswinder Singh	International Association of Engineers
Amandeep	International Association of Engineers
Mr. Manoj Yadav	<ul style="list-style-type: none"> <li>• (AMIE) Associate members of the Institution of Engineers(India) (Membership No AM1753781)</li> </ul>
Narender Kumar	<ul style="list-style-type: none"> <li>• ISTE Member</li> </ul>
Abhishek Kajal	<ul style="list-style-type: none"> <li>• CSI</li> </ul>
Sunil Kumar	Working as <b>SPOC</b> for Smart India Hackathon event since 2017 to 2022, Guru Jambheshwar University of Science & Technology.
Krishan Kumar	<ul style="list-style-type: none"> <li>• The Institute of Engineering (India), [IEI]</li> <li>• Indian Society for Telecommunication Engineers [ISTE]</li> </ul>
SEEMA RANI	<ol style="list-style-type: none"> <li>1. Life Member of Indian Red Cross Society</li> <li>2. Membership of International Association of Engineers (IAENG)</li> <li>3. Life Membership of Indian Society for Technical Education (ISTE)</li> <li>4. Member of Internet Society</li> <li>5. Membership of international Computer Science &amp; Engineering Society (ICSES)</li> <li>6. Membership of Science and Engineering Institute (SCIEI)</li> <li>7. Membership of IFERP</li> </ol>
Anupma Sangwan	IAENG

**ii) Member of Expert Committees:**

Prof. Dharminder Kumar	NIELIT, NBA, NBA-NIRF, DCRUST, YMCA UST, UOU, BOG-HSTES.
Prof. Saroj	<ul style="list-style-type: none"> <li>• Member of DRC, BOS and Faculty of Engineering</li> <li>• Member of state executive committee</li> </ul>
Prof Pradeep Kumar Bhatia	<ul style="list-style-type: none"> <li>• Subject expert OF Selection Committee, Central University Mahendergarh on 04-11-2020</li> </ul>
Prof. Om Parkash Sangwan	<ul style="list-style-type: none"> <li>• Appointed as Expert (5259) for the Accreditation of A/B/C/O Level Courses by National Institute of Electronic and Information Technology, Delhi. (An Autonomous body of Department of Electronics and Information Technology, Ministry of Communications</li> </ul>

	<p>&amp; Information Technology), Electronics Niketan, 6, CGO Complex, Lodhi Road, New Delhi-110003.</p> <ul style="list-style-type: none"> <li>• Appointed as Proctor for the conduct of Student Learning Assessment (SLA) TEQIP-III (No. TEQIP/GJUST/2019/2089-90 dated 05.03.2019).</li> <li>• Expert Member in Inspection committee for inspection of study Centre of Distance Education, GJUST, Hisar, (No.DE-3/2018/82 dt. 29.10.2018).</li> <li>• Member, Board of Studies &amp; Research in Computer Science &amp; Engineering, Member Departmental Research Committee (DRC).</li> <li>• Member, Screening Committee, for Verification of API Score and Screening of the Application for the grant of Higher Grade under CAS, Department of CSE, GJUST, Hisar.</li> </ul>
Jaswinder Singh	Member of Board of Studies and Research of CSE Department, GJUST, Hisar
Amandeep	Member of Board of Studies and Research of CSE Department, GJUST, Hisar
Krishan Kumar Ranga	Training Placement Coordinator of CSE Department, GJUST, Hisar
SEEMA RANI	<ul style="list-style-type: none"> <li>• Member of Committee for Framing Course objectives for BCA Programme.</li> </ul>

### iii) Member of Academic Bodies of other institutions:

Prof. Rishi Pal Singh	<ul style="list-style-type: none"> <li>• Member of Academic Bodies of various other Institutions: <ul style="list-style-type: none"> <li>▪ MDU, Rohtak</li> <li>▪ Indira Gandhi University, Meerpur, Rewari</li> </ul> </li> </ul>
Prof. Dinesh Kumar	<ul style="list-style-type: none"> <li>• Member, Academic Council, DCRUST, Murthal</li> <li>• Expert Member, SOVET, IGNOU, Delhi</li> <li>• Member, Board of Studies (BOS), Faculty of Engineering &amp; Technology, Central University of Haryana, Mahendergarh</li> <li>• Member, Board of Studies (BOS), Department of Computer Science &amp; Applications, Kurukshetra University, Kurukshetra</li> </ul>
Prof. Dharminder Kumar	<ul style="list-style-type: none"> <li>• Member, Academic Council, Uttarakhand Open University, Haldwani.</li> <li>• Member, Faculty of Engineering and Technology, MDU Rohtak.</li> <li>• Member, Faculty of Engineering and Technology, MMU, Mullana.</li> <li>• Member, BOS in Engineering &amp; Technology, MDU Rohtak.</li> <li>• Member, UGBOS, CS, CDLU, Sirsa.</li> <li>• Member, BOS, SRM University, Sonapat.</li> <li>• Member, DRC, BPSM Vishwavidyalaya, Khanpur Kalan, Sonapat.</li> </ul>

Prof. Pradeep Kr. Bhatia	<ul style="list-style-type: none"> <li>• Member of PGBOS in CRS University , Jind</li> </ul>
Prof. Om Parkash Sangwan	<ul style="list-style-type: none"> <li>○ Appointed as Mentor to Govt. Polytechnic for NBA Accreditation by Haryana State Board of Technical Education, Panchkula, Haryana (Memo. No. 965 /HSBTE, dt.: 04.06.2019).</li> <li>○ Member of Doctoral Committee-Reg, Department of Computer Science &amp; Engineering, SRM University, Haryana (Ref. No.: SRMUH/CSE/PhD/2018/03, dated 11.04.2018).</li> <li>○ Member, SRC, Department of IT, Delhi Technological University, Delhi.</li> </ul>
Dr. Ritu Makani	<ul style="list-style-type: none"> <li>• Member BOSR</li> </ul>
Amandeep	<ul style="list-style-type: none"> <li>• Department Research Committee</li> <li>•</li> </ul>
Dr. Deepak Nandal	<ul style="list-style-type: none"> <li>• Department Research Committee</li> </ul>
SEEMA RANI	<ol style="list-style-type: none"> <li>1. Nodal Officer: E-Office</li> <li>2. Office In charge: Scholarship</li> <li>3. Office In charge: Attendance</li> <li>4. Chairperson of SCST</li> <li>5. Office In charge: Time Table</li> <li>6. Member: Internal Complaint Committee</li> <li>7. Advisory Member: NSS</li> <li>8. Member: Training Placement Cell</li> <li>9. Member: Discipline Committee</li> <li>10. Member: Entrepreneurship Development Programming Cell</li> <li>11. Member: Cultural Core Committee</li> <li>12. Member: Anti-ragging SQAD</li> <li>13. Member: Establishment of Centre of Excellence for Artificial Intelligence</li> <li>14. Member: Industry Interaction Cell</li> <li>15. Member: Awareness Campaign regarding admission in engineering courses</li> <li>16. Deputy Superident : CDLSIET, panniwalamota, Sirsa for conducting Theory Exams.</li> <li>17. Paper Setter/Paper Checker: Different Universities &amp; colleges</li> </ol>

**(XIV) Detail of Consultancy Project/ Work in Department: NIL**

Name of Faculty	Title of the project /work	Name of Agency	Total Amount

**(XV) Lectures (other than class) (Invited talks/Extension Lectures) delivered  
(Give Faculty wise detail)**

Type	Topic/ Subject	Institution	Dates	Faculty Name
Expert Lecture	Data Analytics Using R	workshop on "Tools and Software for Data Analytics" Hisar, Food Tech. GJUST Hisar	28th February to 04th March	Saroj Ratnoo
Expert Talk	Cyber Security & Safety Measures for Online Teaching Learning	Cluster level training program at the Govt. Sr. Sec. School, Pali, Hisar Haryana	Jan 25, 2022	Sunil Kumar

**(XVI) Additional Duties Performed/Positions held in the University  
(Teacher-wise)**

Sr. No.	Name of Teacher	Additional Positions	Duration From	Duration To
1.	Prof. Dharmender Kumar	Chairperson, Deptt. of CSE	July 10, 2020	Till date
2.	Prof. Om Prakash Sangwan	Director, DDE	01-October-2020	31-October-2022
3.	Pradeep Kumar Bhatia	Member of Court Member of Executive Council (EC) Member of Academic Council(AC )	19-4-19 28-8-20 4-2-20	1-5-2020 22-4-2021 19-3-2021
4.	Ms. Ritu	Member FET Member University Court	Current 17-3-2021	1-11-2022 Till Date
5.	Jaswinder Singh	Deputy Coordinator for NBA Activities of the university	1-07-2021	30-06-2022
6.	Jaswinder Singh	Ph. D Coordinator of Department of CSE	1-07-2021	30-06-2022
7.	Jaswinder Singh	Alumni Coordinator of Department of CSE	1-07-2021	30-06-2022



8.	Amandeep	Exam and Practical Coordinator of CSE dept.	10-07-2020	Till date
9.	Krishan Kumar Ranga	Nodal Officer (PPP) of the University	1-07-2021	30-06-2022
10.	Krishan Kumar Ranga	Training Internship Coordinator of Department of CSE/ IT	1-07-2021	30-06-2022
11.	Krishan Kumar Ranga	Member of Placement Cell of Department of CSE	1-07-2021	30-06-2022
12.	Dr. Sunil Kumar	Incharge Dept. of Data Science	22-04-2021	Till Date
13.	Dr. Sunil Kumar	NSS Program Officer	15-06-2021	Till Date
14.	Dr. Sunil Kumar	IQAC Coordinator	27-03-2021	Till Date
15.	Dr. Sunil Kumar	Gate Preparation Classes Coordinator	27-03-2021	Till Date

**(XVII) Training /Internship/ Placement Activities information of the Department:**

Activity	No. of Students placed	No. of Companies in which placed*
Training	Referred to Training and Placement Cell.	
Placement		
Activity	No. of Students	No. of Companies *
Training	Referred to Training and Placement Cell.	
Placement		

- Note:- Please attach a list of companies alongwith number of students for training and placement with dates, etc..

**(XVIII) Detail of Academic activities/Professional Activities/ Programmes Organized in Department during the year:**

**i Seminar/Conference/Refreshers course/Workshop/Training Programme**

Name of the Event	National/ International	Number of participants	Dates/ Duration
One Week AICTE Sponsored Online Faculty Development Program (FDP) on Information and Cyber Security	National	290	27-09-2021 to 02-10-2021
One Week AICTE Sponsored Online Faculty Development	National	298	07-02-2022 to 12-02-2022

Program (FDP) on Artificial Intelligence & Machine Learning			
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**ii. Extension lecture:**

Topic	Resource Person	Number of Participants	Dates

**iii. Students tour**

Places Visited	Number of Participants	Dates/ Duration	Faculty Incharge

**iv. Industry interaction programmes :**

Name of the Event	Name of the Industry	Name of the Participants	Dates/ Duration

**(XIX) Awards/ Honours received by Faculty**

Name of the Teacher	Title of the Award	Name of the Awarding Agency	National / International	Date Conferred

**(XX) Any other important Information/ Achievement of the Department:**

**Signature of the Chairperson**

**ANNEXURE****DEPARTMENT OF Computer Science & Engineering****Summary of Research Publications:**

<b>Total Books Published</b>	<b>Books published with International publisher</b>	<b>Books published with National publisher</b>	-
<b>02</b>	<b>02</b>	<b>--</b>	<b>-</b>
<b>Total Research papers published in Journals</b>	<b>Total Published in UGC-CARE List Group 1</b> (Journals found qualified through UGC-CARE protocols)	<b>Total Published in UGC-CARE List Category 2</b> (Journals Indexed in WOS/Scopus)	<b>Highest Impact Factor</b>
<b>47</b>	<b>12</b>	<b>35</b>	<b>-</b>
<b>Total Number of Papers Published in Conferences</b>	<b>Total published in Scopus/WOS indexed Conferences</b>	<b>Total published in non-indexed Conferences</b>	<b>-</b>
<b>10</b>	<b>10</b>	<b>--</b>	
<b>Total number of funded research projects</b>	<b>Completed</b>	<b>Ongoing</b>	<b>-</b>
<b>04</b>	<b>--</b>	<b>04</b>	
<b>TOTAL NUMBER OF SCHOLARS REGISTERED in PH.D. PROGRAMME</b>	<b>PhD. Degree submitted</b>	<b>PhD. Degree awarded</b>	<b>-</b>
<b>10</b>	<b>07</b>	<b>07</b>	<b>-</b>

**Signature of the Chairperson**

**ANNEXURE****DEPARTMENT OF \_\_\_\_\_**

**Overall recommendations of the Chairperson based on the Annual Report and Academic & Research plan for the next year, through Academic Committee of the Department.**

**Signature of the Chairperson**