

17. List of Research Projects/ Consultancy Works

1	Number of Projects carried out, funding agency, Grant received	Enclosure -17
2	Publications (if any) out of research in last three years out of masters projects	
3	Industry Linkage	
4	MoUs with Industries (minimum 3)	

1. Number of Projects carried out, funding agency, Grant received:

Name of the Scheme/Project/ Endowments / Chairs	Name of the Principal Investigator/ Co Investigator (if applicable)	Name of the Funding agency	Type (Government/ Non-Government)	Year of Award	Funds provided (INR in lakhs)
Continuous Monitoring the Student Performance and Maintaining Competency Meter	NILAYKUMAR MOHITKUMAR VAIDYA - CHARUSAT - PI, ATUL MANUBHAI PATEL - CHARUSAT - Co-PI	CHARUSAT	Non-Government Funded Project	04-Sep-2020	65000
Applications of machine learning in developing novel Screening modality for rapid detection of ocular abnormalities in pediatric population	YOGESH RAVJIBHAI VAGHELA - CHARUSAT - PI, SANSKRUTI VRIJLAL PATEL - CHARUSAT - PI	CHARUSAT	Non-Government Funded Project	04-Sep-2020	90000

Smart Assistive Device for Visually Impaired Persons	SANSKRUTI VRIJLAL PATEL - CHARUSAT - PI	SSIP GUJARAT - STUDENT STARTUP AND INNOVATION POLICY - 51000.00 (INR), CHARUSAT - 51000.00 (INR)	Government Funded Project	27-Mar-2021	102000
Testbed and Model for Profile-based Vehicle Insurance Premium Estimation using IoT and Machine Learning	SOHIL DINESHKUMAR PANDYA - CHARUSAT - PI, ATUL MANUBHAI PATEL - CHARUSAT - Co-PI, JAIMIN NAVINCHANDRA UNDAVIA - CHARUSAT - Co-PI	CHARUSAT	Non-Government Funded Project	03-Apr-2021	161850

Human physiological features data collection and classification of Human Prakriti using Image Processing techniques	ARPIT RASESHKUMAR TRIVEDI - CHARUSAT - PI, ATUL MANUBHAI PATEL - CHARUSAT - Co-PI, DHARMENDR A TRIKAMLAL PATEL - CHARUSAT - Co-PI	CHARUSAT	Non-Government Funded Project	15-Apr-2022	100000
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2. Publications:

Title of paper	Name of the author/s	Name of journal	ISSN number
AY:2020-21			
SAG Cluster: An unsupervised graph clustering based on collaborative similarity for community detection in complex networks	SMITA AGRAWAL, ATUL MANUBHAI PATEL	Physica A: Statistical Mechanics and its Applications	0378-4371
IDENTIFICATION OF ADULTERATION IN HOUSEHOLD CHILLI POWDER FROM ITS IMAGES USING LOGISTIC REGRESSION TECHNIQUE	NILAM SANATKUMAR DESAI, DHARMENDRA TRIKAMLAL PATEL	Reliability: Theory and Applications	1932-2321
Bacterial Colony Classification Using Atrous Convolution with Transfer Learning	SANSKRUTI VRIJLAL PATEL	Annals of the Romanian Society for Cell Biology	1583-6258
Classification of COVID-19 from chest X-ray images using a deep convolutional neural network	SANSKRUTI VRIJLAL PATEL	Turkish Journal of Computer and Mathematics Education (TURCOMAT)	1309-4653
Predicting a Risk of Diabetes at Early Stage using Machine Learning Approach	SANSKRUTI VRIJLAL PATEL, ATUL MANUBHAI PATEL, NILAY PRAVINCHANDRA GANATRA, RACHANA SUNILKUMAR PATEL	Turkish Journal of Computer and Mathematics Education	1309-4653
Artificial Intelligence and IoT based Smart Irrigation system for Precision Farming	HETALBEN PUNJABHAI PATEL, ATUL MANUBHAI PATEL, SHAILESH BABUBHAI KHANT	Turkish Journal of Computer and Mathematics Education	1309-4653
Optical Communication Engineering Simulation Laboratory for Effective Undergraduate Education during Era of Covid19	SHAILESH BABUBHAI KHANT, ATUL MANUBHAI PATEL, PRAVIN PRAJAPATI	Turkish Journal of Computer and Mathematics Education (TURCOMAT)	1309-4653

Abnormality Detection from X-Ray Bone Images using DenseNet Convolutional Neural Network	ABHILASH MAHESHKUMAR SHUKLAATUL MANUBHAI PATEL	International Journal of Current Research and Review	0975-5241
Simulation Experiment of Key Exchange Protocol in Mobile Devices With E-Commerce Application	PRANAV JYOTISHBHAI VYAS BHUSHAN TRIVEDI	International Journal of Information Security and Privacy	1930-1650
Clustering Algorithm for Community Detection in Complex Network: A Comprehensive Review	AGRAWAL SMITAKUMARI SURESHKUMAR,AT UL MANUBHAI PATEL	Recent Advances in Computer Science and Communications	2666-2566
DEVELOPMENT OF A CONVOLUTIONAL NEURAL NETWORK MODEL FOR BRAIN ABNORMALITY CLASSIFICATION	BARAD HETAL HARSHADRAI, ATUL MANUBHAI PATEL	Indian Journal of Computer Science and Engineering (IJCSE)	0976-5166
AY:2021-22			
IDENTIFICATION OF ADULTERATION IN HOUSEHOLD CHILLI POWDER FROM ITS IMAGES USING LOGISTIC REGRESSION TECHNIQUE	NILAM SANATKUMAR DESAI DHARMENDRA TRIKAMLAL PATEL	Reliability: Theory and Applications	1932-2321
SAG Cluster: An unsupervised graph clustering based on collaborative similarity for community detection in complex networks	SMITA AGRAWAL ATUL MANUBHAI PATEL	Physica A: Statistical Mechanics and its Applications	0378-4371
Bacterial Colony Classification Using Atrous Convolution with Transfer Learning	SANSKRUTI VRIJLAL PATEL	Annals of the Romanian Society for Cell Biology	1583-6258
Classification of COVID-19 from chest X-ray images using a deep convolutional neural network	SANSKRUTI VRIJLAL PATEL	Turkish Journal of Computer and Mathematics Education (TURCOMAT)	1309-4653
Predicting a Risk of Diabetes at Early Stage using Machine Learning Approach	SANSKRUTI VRIJLAL PATEL ATUL MANUBHAI PATEL NILAY	Turkish Journal of Computer and Mathematics Education	1309-4653

	PRAVINCHANDRA GANATRA RACHANA SUNILKUMAR PATEL		
Artificial Intelligence and IoT based Smart Irrigation system for Precision Farming	HETALBEN PUNJABHAI PATEL ATUL MANUBHAI PATEL SHAILESH BABUBHAI KHANT	Turkish Journal of Computer and Mathematics Education	1309-4653
Optical Communication Engineering Simulation Laboratory for Effective Undergraduate Education during Era of Covid19	SHAILESH BABUBHAI KHANT ATUL MANUBHAI PATEL PRAVIN PRAJAPATI	Turkish Journal of Computer and Mathematics Education (TURCOMAT)	1309-4653
Abnormality Detection from X-Ray Bone Images using DenseNet Convolutional Neural Network	ABHILASH MAHESHKUMAR SHUKLA ATUL MANUBHAI PATEL	International Journal of Current Research and Review	0975-5241 (Online) 2231-2196 (Print)
AY:2022-23			
Research perspective and review towards brain tumour segmentation and classification using different image modalities	(MAIN & CORR) CE - MAYURI JAMANADAS POPAT (833), CHARUSAT; (CO-S) CE - SANSKRUTI VRIJLAL PATEL (941), CHARUSAT	Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization	2168-1171
IoT based Student Attendance Management System using RFID and Face Recognition	(MAIN) CE - UNNATI AKSHAYKUMAR PATEL (1057), CHARUSAT; (CORR) OT - DR. PRIYA SWAMINARAYAN, PARUL UNIVERSITY	International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)	2581-9429
Assessing Meteorological Drought and Detecting LULC Dynamics at a Regional Scale Using SPI, NDVI, and Random Forest Methods	(MAIN & CORR) CE - SANDEEP VASANT GAIKWAD (1039), CHARUSAT; (CO) OT - AMOL D.VIBHUTE, SYMBIOSIS INSTITUTE OF COMPUTER STUDIES	SN Computer Science	2661-8907

	AND?RESEARCH (SICSR), SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY); (CO-S) OT - PROF. K. V. KALE, DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE,		
COMPUTING THE LAND SURFACE TEMPERATURE AND CORRELATING WITH SPECTRAL INDICES OF KHEDA (KAIRA) DISTRICT, GUJARAT, INDIA	(MAIN & CORR) CE - ARPANKUMAR GOVINDBHAI RAVAL (1042), CHARUSAT; (CO) CE - ATUL MANUBHAI PATEL (234), CHARUSAT; (CO) CE - UNNATI AKSHAYKUMAR PATEL (1057), CHARUSAT; (CO) CE - KAMINI HIREN SOLANKI (1061), CHARUSAT	Harbin Gongye Daxue Xuebao/Journal of Harbin Institute of Technology	0367-6234
An Experiment of a Parallel Entry Security Testing Approach using Ethereum Blockchain	(MAIN & CORR) CS - BOSAMIA MANSI PRAKASHBHAI (14DRMCA007), CHARUSAT; (CO-S) CE - DHARMENDRA TRIKAMLAL PATEL (155), CHARUSAT	International Journal of Engineering Trends and Technology	2231-5381
Approach and Techniques for Precise Prediction of N-Linked Glycosylation from Human Protein using Artificial Intelligence	(MAIN & CORR) CE - MUBINA SHAQIL MALIK (995), CHARUSAT; (CO-S) CE - JAIMIN NAVINCHANDRA UNDAVIA (943), CHARUSAT	International Journal of Engineering Trends and Technology	2231-5381
Marigold Flower Blooming Stage Detection in Complex Scene Environment using Faster RCNN with Data Augmentation	(MAIN & CORR) CE - SANSKRUTI VRIJLAL PATEL (941), CHARUSAT	International Journal of Advanced Computer Science and Applications (IJACSA)	2156-5570

AUTOMATED MODEL BY APPLYING MACHINE LEARNING ALGORITHMS (ML) FOR EARLY LIVER DISEASE PREDICTION	(MAIN & CORR) OT - SAMIKSHA H. ZAVERI, PARUL UNIVERSITY; (CO-S) CE - KAMINI HIREN SOLANKI (1061), CHARUSAT	Journal of Data Acquisition and Processing	1004-9037
Facial Expression Recognition – A Study and its counterparts	(MAIN & CORR) CE - KONICA SUNNY SONI (1055), CHARUSAT; (CO) CE - JAIMIN NAVINCHANDRA UNDAVIA (943), CHARUSAT; (CO) CE - JANKIBEN PANKAJBHAI PARMAR (1052), CHARUSAT	International Journal of Marketing and Technology	2249-1058
A Comprehensive assessment of Convolutional Neural Networks for skin and oral cancer detection using medical images	(MAIN & CORR) CE - DHATRI KIRANBHAI RAVAL (992), CHARUSAT; (CO-S) CE - JAIMIN NAVINCHANDRA UNDAVIA (943), CHARUSAT	Healthcare Analytics	2772-4425
Learn with Curiosity: A Hybrid Reinforcement Learning Approach for Resource Allocation for 6G enabled Connected Cars	(MAIN & CORR) CE - SAGAR DIPAKKUMAR KAVAIYA (1062), CHARUSAT	Mobile Networks and Applications	1572-8153
Recent Progress for the Synthesis of Pyrrole Derivatives – An Update	(MAIN) CS - PATEL DHARTIBEN MINESHBHAI (20BPH036), CHARUSAT; (CORR) CE - ASHISH DHIRUBHAI PATEL (1318), CHARUSAT; (CO) CE - ANJALI BRIJENDRAKUMAR MAHAVAR (1058), CHARUSAT; (CO) CS - PATEL KRISHI SANDEEP (20BPH054), CHARUSAT; (CO) CS - PATEL	Mini-Reviews in Organic Chemistry	1875-6298

	AYUSHKUMAR KIRANBHAI (20BPH031), CHARUSAT; (CO) CS - SHAH DRASHTIBEN PRAGNESHKUMAR (22MPHPCM001), CHARUSAT; (CO) OT - TUSHAR BAMBHAROLIYA, NORTH CAROLINA STATE UNIVERSITY		
Experimenting Sensor-based Effective Energy Saving Module for Household Electricity Consumption	(MAIN & CORR) OT - RINKU CHAVDA, SUBHASH UNIVERSITY; (CO- S) CE - SOHIL DINESHKUMAR PANDYA (1030), CHARUSAT	Gandhinagar University - Journal of Engineering and Technology (GU- JET)	2249-6157 (ISSN Print)
Age Invariant Face Recognition Techniques: A survey on the Recent Developments, Challenges and Potential Future Directions	(MAIN & CORR) CS - MITTAL SONIA (14DRMCA001), CHARUSAT; (CO-S) CE - SANSKRUTI VRIJLAL PATEL (941), CHARUSAT	International Journal of Engineering Trends and Technology	2231-5381

3. Industry Linkage

Sl.No	Name of the Company	Academic Year	Number of Students Placed	Average Salary Offered
1	Gateway Corporation	2020-21	4	450000
2	openxcellinc	2020-21	3	450000
3	Tatvasoft	2020-21	1	360000
4	Primewera	2020-21	1	350000
5	Synoverge	2020-21	1	350000
6	Sarjen System	2020-21	3	250000
7	Harikrupa Automation	2020-21	2	240000
8	Hyperlink Infosystems	2020-21	8	240000
9	Loadstone Software	2020-21	15	240000
10	Biztech Consultancy	2020-21	4	200000
11	CybercomCreation	2020-21	9	200000
12	Simcon	2020-21	1	200000
13	Allian Software	2020-21	5	180000
14	Arsenal Technology	2020-21	9	240000
15	HitechSolution	2020-21	6	180000
16	ITPath	2020-21	9	240000
17	Krish Compu Soft Services	2020-21	1	180000
18	Technoguide	2020-21	10	180000
19	Vako online platforms	2020-21	1	180000
20	Tryon	2020-21	7	120000
21	WaytoWeb	2020-21	2	120000
22	RK Websoft Technologies Pvt.Ltd	2020-21	6	95000
23	DHAVAT INFOTECH PVT. LTD.	2020-21	5	95000
24	IRivet India LLP	2021-22	1	250000
25	Akshar Group Technologies	2021-22	1	200000
26	ArsenalTech PVT. LTD.	2021-22	1	300000
27	AVISTA Web Technologies Pvt. Ltd.	2021-22	1	200000
28	BIT INFOTECH	2021-22	2	200000
29	Biztech IT Consultancy Pvt. Ltd	2021-22	3	201000
30	Brainbean Technolabs Pvt. Ltd.	2021-22	2	200000
31	Celebal Technology	2021-22	4	500000
32	Charusat university	2021-22	1	200000
33	CIMCON INFOTECH	2021-22	1	300000

34	ConvergeSol (ConvergeSoft International Pvt Ltd.)	2021-22	3	550000
35	Crest Data Systems	2021-22	10	650000
36	DHAVAT INFOTECH PVT. LTD.	2021-22	4	200000
37	Dignizant Technologies	2021-22	1	180000
38	DRC Systems India Limited	2021-22	6	450000
39	Enlighten Infosystem	2021-22	1	180000
40	Epsilon technology	2021-22	1	200000
41	Gateway Group of Companies	2021-22	1	201000
42	HARIKRISHNA BUILDCON	2021-22	1	500000
43	HATKESH INFOTECH PVT.LTD	2021-22	3	200000
44	Hulk Apps	2021-22	1	200000
45	Hyperlink Infosystem	2021-22	1	264000
46	IT PATH SOLUTIONS	2021-22	4	201000
47	Krish Compusoft services	2021-22	1	180000
48	Meditab software Pvt Ltd	2021-22	1	400000
49	MOTOTIVE WEB SOLUTION	2021-22	1	200000
50	NAVIDAD INFOTECH PVT LTD.	2021-22	1	250000
51	Odysseus Solution	2021-22	1	360000
52	P Tech Pos	2021-22	3	216000
53	R way corporates	2021-22	1	180000
54	S K INFOFOT	2021-22	3	220000
55	Satva Solutions	2021-22	2	300000
56	Saurabh web solution	2021-22	4	180000
57	Simform Solutions	2021-22	9	400000
58	Solution Analysts	2021-22	1	480000
59	sparks to ideas	2021-22	1	180000
60	SPECTRA COMPUTER (S K INFOFOT)	2021-22	1	220000
61	Squad Technologies Pvt. Ltd.	2021-22	3	150000
62	Survivor Infotech	2021-22	2	230000
63	Synoverge technologies	2021-22	2	300000
64	Tata Consultancy Services	2021-22	3	300000
65	Tech Mahindra	2021-22	1	306000
66	TechnoGuide Infosoft Pvt. Ltd. Anand	2021-22	8	300000
67	The One Technologies	2021-22	2	300000
68	Thinkonic Technology	2021-22	3	180000
69	Tops Technologies	2021-22	1	180000
70	Trileotech	2021-22	2	240000
71	Vital Solutions	2021-22	1	220000

72	Volansys Technologies Private Limited, Ahmedabad.	2021-22	5	300000
73	Way To Web Pvt Ltd	2021-22	2	180000
74	Zignuts Technolab Pvt Ltd	2021-22	4	300000
75	IRivet	2022-23	1	240000
76	AceInfoway	2022-23	6	300000
77	Allian Software	2022-23	5	180000
78	Amul, Anand	2022-23	1	220000
79	Anblicks	2022-23	2	600000
80	Arth Technologies, Vadodara	2022-23	1	180000
81	ASITE	2022-23	3	650000
82	Biztech Consultancy	2022-23	3	300000
83	CasePoint	2022-23	2	280000
84	Cimcon Technologies	2022-23	2	420000
85	Code Infosys	2022-23	1	150000
86	COVRIZE	2022-23	2	400000
87	Dakshya	2022-23	2	400000
88	Desire Infotech IT	2022-23	1	150000
89	Einfochips	2022-23	5	400000
90	GetOnCRMSolution	2022-23	1	315000
91	Hyperlink Solutions	2022-23	5	280000
92	IT Path	2022-23	9	450000
93	KIWIQA	2022-23	2	300000
94	Kody Technologies	2022-23	2	500000
95	Kshatra Infotech	2022-23	1	400000
96	Mastek	2022-23	3	500000
97	Matrix Comsec Pvt Ltd	2022-23	1	600000
98	Navera	2022-23	2	520000
99	Odyseuss	2022-23	1	400000
100	Quodor Technologies	2022-23	1	360000
101	ScaleEdge	2022-23	2	620000
102	Simform Solutions Pvt. Ltd.	2022-23	8	650000
103	Skyttus, Valsad	2022-23	1	150000
104	Squad Technologies	2022-23	2	450000
105	TECBLIC	2022-23	5	400000
106	Tech Mahindra	2022-23	13	325000
107	ThatsEnd Pvt Ltd.	2022-23	1	300000
108	TheOne Technology	2022-23	6	300000
109	TridhyaTech	2022-23	5	520000
110	Xcellence IT Solutions	2022-23	1	300000
111	Zignuts Technolab - Top Web & Mobile App Development company	2022-23	10	360000

4. MoUs with Industries:

Throughout Year 2020-21, 2021-22, and 2022-23

Organisation with which MoU is signed	Name of the institution/ industry/ corporate house	Year of signing MoU
Tatal Consultancy Services - iON	Tata Consultancy Services (TCS)	1-Jun-16
NSEIT Ltd	NSEIT Ltd	9-Nov-17