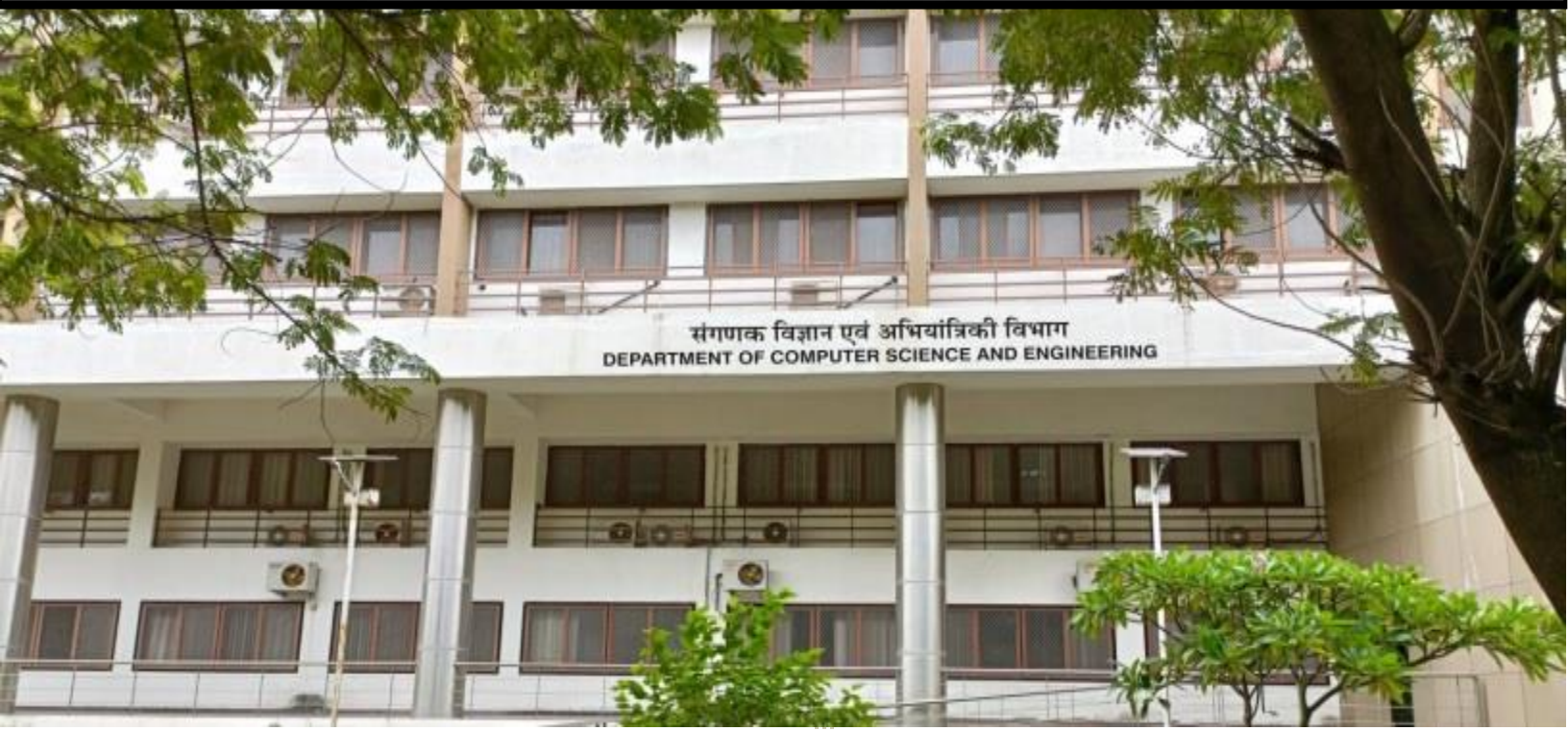
SVNIT NEWSLETTER

JULY 2024,
ISSUE - 11

संगणक विज्ञान एवं अभियांत्रिकी विभाग
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



DEPARTMENT VISION

The vision of Computer Science and Engineering Department is to recognize itself as a globally renowned learning center in the field of Computer Science & Engineering and foster research and innovations for the global good.

DEPARTMENT MISSION

The mission of Computer Science and Engineering Department is to impart education that encourages students to read critically, reason analytically, communicate persuasively, apply professionally and prepare them to excel in the field of computing, Imbibe strong-willed attitude in the students, research scholars and its own community to use their knowledge and skill-sets for the improvement of the society, country, and global community, Provide education based on ethical values resulting in knowledge and skills valued by industry and society and Impart training and create an environment that enables students and faculty members alike to engage in lifelong learning and pursuit of knowledge.

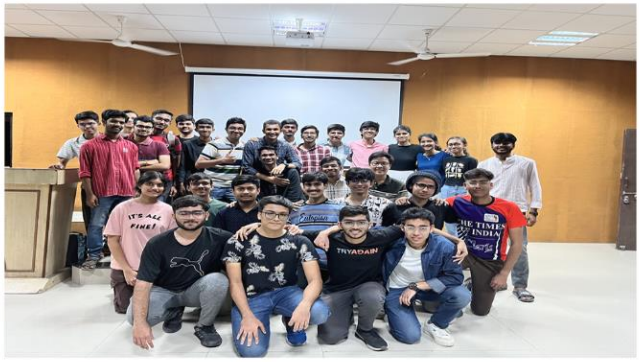
MESSAGE FROM HEAD OF THE DEPARTMENT

The Department has implemented National Education Policy (NEP) 2020. The curriculums of UG and PG programs are designed as per new education policy with a multidisciplinary approach. Two M.Tech. programs, M.Tech. Information Security and Privacy and M.Tech. Data Science are started from academic year 2023-24. The department is also in the process of a third drive for faculty recruitment. Although there is overall slack in the recruitment process, 85% recruitment is reported in the department for the academic year 2023-24 with the highest salary of 52 lakhs. First batch of B.Tech. where 8th semester is completely industry-based internship has been completed by the students successfully. M. Tech. students are also availing industry internships as a part of their dissertation. The department has a number of ongoing research projects. All the best to the students and faculty members for the next academic year 2024-25.

PROF. MUKESH A. ZAVERI
Professor & Head,
DoCSE, SVNIT, Surat
Email: hod@coed.svnit.ac.in

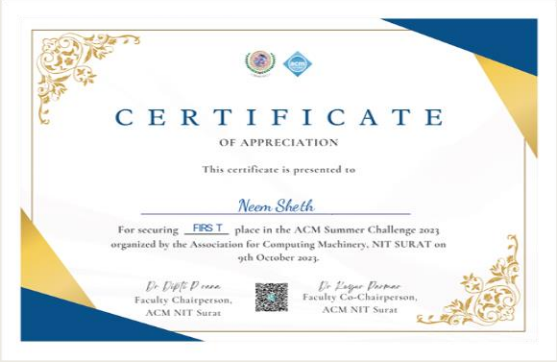
STUDENT ACHIEVEMENTS

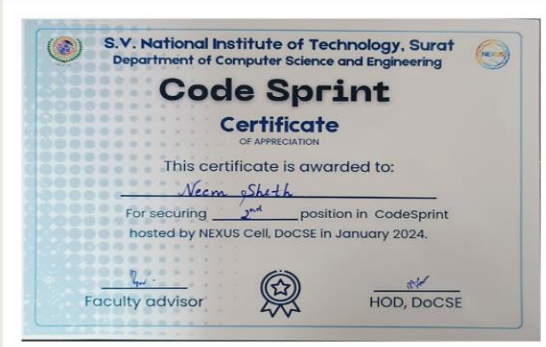
The NEXUS cell of the department has conducted the event RIDDLEFUSE on 20th January, 2024. There were total of 156 participants registered for this event. RIDDLEFUSE consisted of three rounds. Escape round in which participants have to solve puzzle and find key to escape from the room. Total 64 participants proceeded to the second round which was fun game round in which they have to compete in the team of four. Total three teams became winner. NEXUS also launched its website during this event.



NEEM SHETH
(U22CS059)

Neem Sheth secured first place in the ACM summer challenge 2023 organized by the Association for Computing Machinery (ACM), SVNIT Surat on 9th October 2023. He secured second place in CodeSprint hosted by NEXUS Cell in January 2024.


CERTIFICATE
OF APPRECIATION
This certificate is presented to
Neem Sheth
For securing FIRST place in the ACM Summer Challenge 2023 organized by the Association for Computing Machinery, NIT SURAT on 9th October 2023.
Faculty Chairperson, ACM NIT Surat
Faculty Co-Chairperson, ACM NIT Surat


S.V. National Institute of Technology, Surat
Department of Computer Science and Engineering
Code Sprint
Certificate
OF APPRECIATION
This certificate is awarded to:
Neem Sheth
For securing 2nd position in CodeSprint hosted by NEXUS Cell, DoCSE in January 2024.
Faculty advisor
HOD, DoCSE

Misbah Shaikh, Mahesh Thakkar, Kaushik Bhowmik, and Tejo Kaushal were shortlisted for the grand finale of Smart India Hackathon 2023 at Veer Surendra Sai University, Sambalpur, Odisha for open Innovation Category.

MISBAH SHAIKH
(U22CS043)

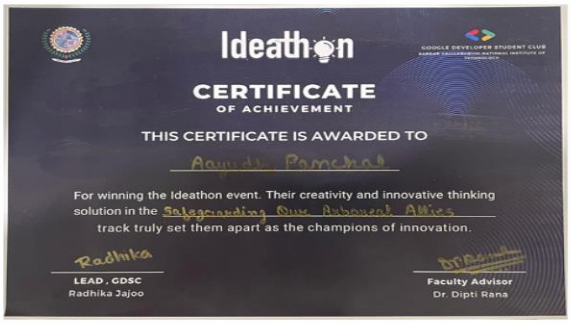
MAHESH THAKKAR
(U21CS023)

KAUSHIK BHOWMIK
(U21CS022)

TEJO KAUSHAL
(U21CS119)

STUDENT ACHIEVEMENTS

AAYUDH PANCHAL (U22CS050)



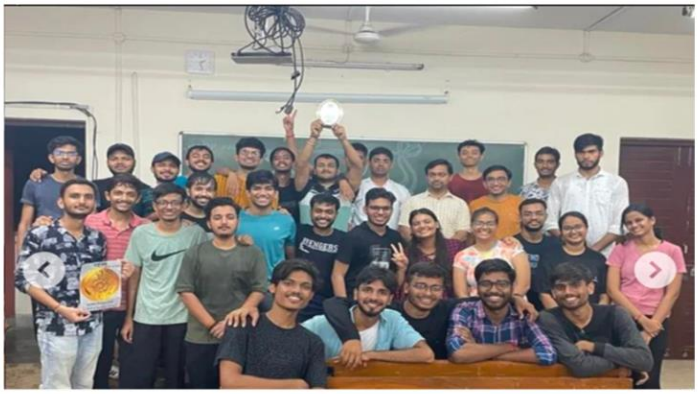
KEYA PATEL (U22CS047)

TANISH PANCHAL (U22CS069)

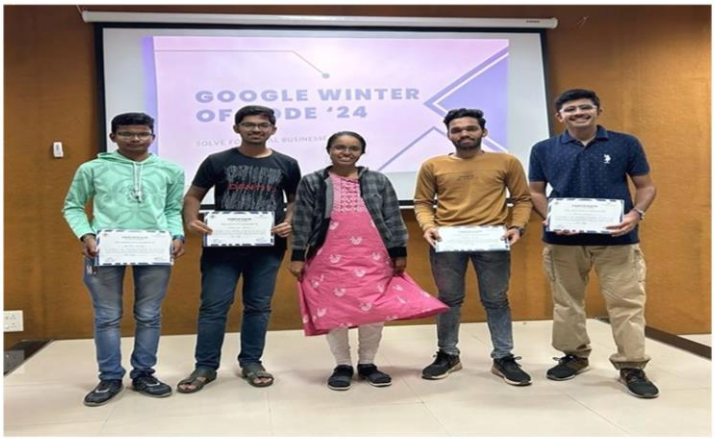
Aayudh Panchal (U22CS050), Tanish Panchal (U22CS069), Keya Patel (U22CS047) and Anushka Ghushe (U22CS022) secured first position in Ideathon event for the track "Safeguarding our Arboreal Allies" organised by the Google Developer Students Club, at SVNIT Surat.

ANUSHKA GHUSHE (U22CS022)

NITIN MEENA (U21CS106) Secured first position in All India Inter NIT Cricket Tournament 2024 held at NIT Trichy. He also secured player of the match in league match, semifinal match and final match.



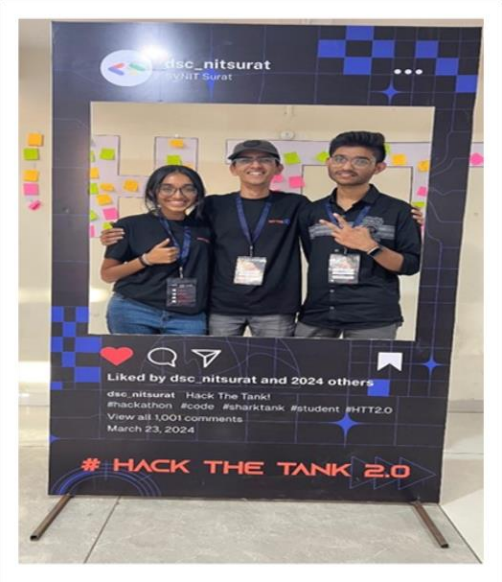
MOHAMMED FOWZAN (U22CS008), PARAM KAMLESH PATHAK (U22CS023), VAIBHAV GUPTA (U22CS029) and BARAIYA AASHUTOSH RAJUBHAI (U22CS109) secured first rank in Google Winter of Code event organized by Google Developer Student Club of SVNIT.



STUDENT ACHIEVEMENTS

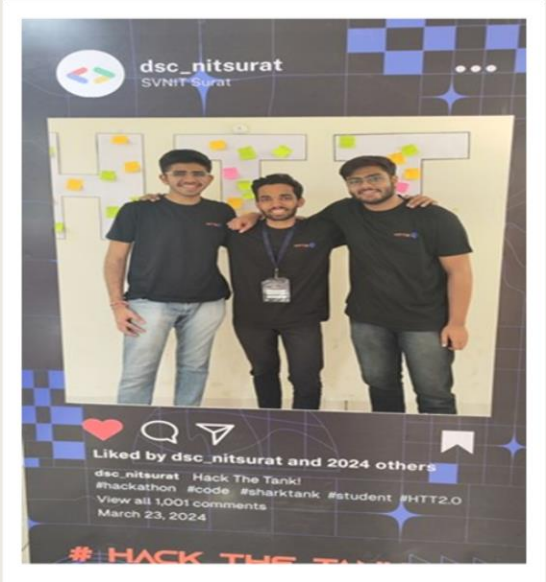
Following teams are the winners of "Hack the Tank", which is a groundbreaking hackathon where the innovation of Shark Tank meets the brilliance of student developers. In this 30-hour event, aspiring talents dive into unique problem statements presented by Shark Tank entrepreneurs, spanning diverse domains such as web development, app development, and data analytics. Teams for PAN India are invited to register and develop solutions to the technical solutions to the technical problems designed by the Shark Tank businesses of Season 1, 2 and 3 themselves.

Secured 2nd Rank



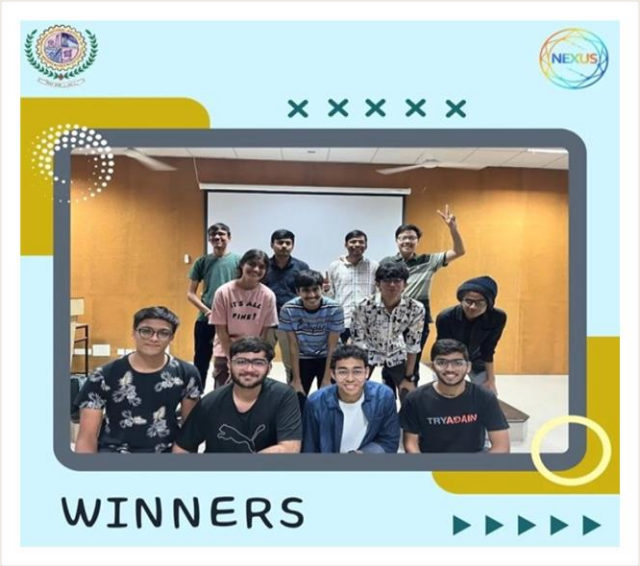
KEYA PATEL (U22CS047)
DARSHAN VEKARIYA (U22CS030)
AAYUDH PANCHAL (U22CS050)

Secured 3rd Rank



PARAM KAMLESH PATHAK (U22CS023)
VAIBHAV GUPTA (U22CS029)
AKSHAT SAHU (U22CS034)

AMAN RAJ (U23CS021), MANAN VELANI (U23CS027), DIVYANSH MARTOLIA (U23CS044) AND PRATHAMKUMAR MAHESHWARI (U23CS070) secured first rank in RiddleFuse 2024, a dynamic event crafted by Nexus cell, which includes Fun activities, Games and Debates.

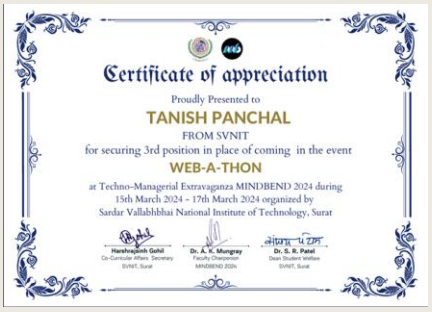


STUDENT ACHIEVEMENTS

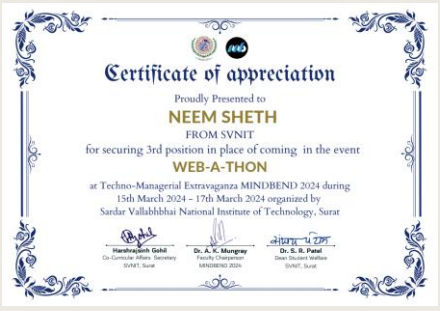
MEET MODI (U22CS027) and PARAS VERMA (U23CS117) secured third rank in Dalal Street event organized by Mindbend 2024, SVNIT Surat. In this event, participants have to put their expertise to the test as they navigate the dynamic stock market, buying and selling to maximize their portfolio value. Set in the year 1992, teams have to engage in offline physical trading to increase their stock portfolios.

TANISH PANCHAL (U22CS069) and NEEM SHETH (U22CS059) secured third place in Web-A-Thon event organized by Mindbend 2024, SVNIT Surat. In this event participants have to create user-friendly websites based on a problem statement by using knowledge of HTML, CSS, OOP, JS, and more.

TANISH PANCHAL
(U22CS069)

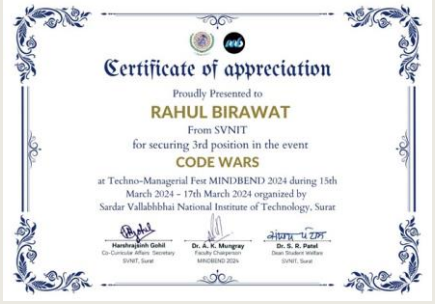


NEEM SHETH
(U22CS059)

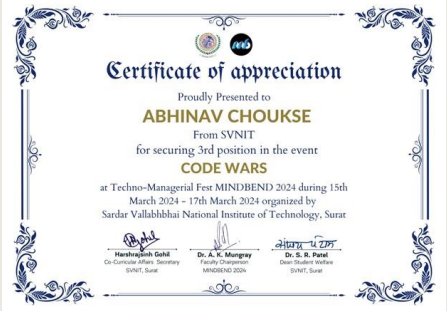


MEET PARMAR (U22CS105) secured third rank in Code Wars event organized by Mindbend 2024, SVNIT Surat. Code Wars is an ICPC-style coding contest where students showcase their skills in an electrifying atmosphere.

RAHUL BIRAWAT
U22CS093



ABHINAV CHOUKSE
U22CS086



ALUMNI INFORMATION

HIGHER STUDY

KAVYA CHETANKUMAR PAREKH (U20CS036) is admitted in MS in the Software Engineering at Arizona State University.

VISHVESH TRIVEDI (U20CS130) is admitted in MS in Computer Science at Courant, New York.

VRAJ RAJPURA (U20CS065) is admitted in MS in Information Management, University of Washington.

VEDANT DALAL (U17CO006) is admitted in MBA program at IIM Bangalore, India.

PRIYANKA BHATLA (U16CO004) is admitted in Master of Science in Business Analytics (Flex) program at The University of Texas at Dallas' Naveen Jindal School of Management for the Spring 2024 semester.

JOURNAL/CONFERENCE/BOOK PUBLICATIONS

Surendra Tyagi, Devesh C. Jinwala, Subhasis Bhattacharjee: Decentralised ontology-based access control in internet of things using social context. Int. J. Ad Hoc Ubiquitous Computing. 45(4): 213-225, 2024.
Rutal Mahajan and Mukesh Zaveri, "An Automatic Humor Identification Model with Novel features from Berger's Typology and Ensemble Models", Decision Analytics Journal, Elsevier, Vol. 11, March 2024.
Vivek H. Champaneria, Sankita J. Patel and Mukesh A. Zaveri, "A cancelable biometric authentication scheme based on geometric transformation", Multimedia Tools and Applications, Springer Nature, pp. 1-22, June 2024.
M. Makwana and R. G. Mehta, "Keyphrase-based Literature Recommendation: Enhancing User Queries with Hybrid Co-citation and Co-occurrence Networks," Journal of Scientometric Research, vol. 13, no. 1, pp. 217–229, 2024.
Vora, S., Mehta, R.G. HDEL: a hierarchical deep ensemble approach for text-based emotion detection. Multimed Tools Appl (2024).
N. Kapadia, R.G. Mehta "Energy efficient waste collection vehicle routing system using time series prediction" Multimedia Tools and Applications (Springer) April 2024.
Sharma Kratika, Tiwari Ritu, Wadhwani Arun Kumar, Chaturvedi Shobhit, Spatiotemporal analysis of land surface temperature trends in Nashik, India: A 30-year study from 1992 to 2022. Earth Science Informatics, Springer, 17(02), 2107-2128, 2024.
Mitali Desai, Rupa Mehta, Dipti Rana, "Contextual analysis of scholarly communications to identify the source of disinformation on digital scholarly platforms", Kybernetes, Vol. 53 No. 4, pp. 1434-1449, 2024.
M J. K. Kumar, Dipti Rana, "HARUIM: High Average Recent Utility Itemset Mining", International Journal of Data Mining Modeling and Management, Inderscience Publisher, 1 January 2024.
M J. K. Kumar, Dipti Rana, "HARUIM: High Average Recent Utility Itemset Mining", International Journal of Data Mining Modeling and Management, Inderscience Publisher, pp. 66 – 100, 1 January 2024.
Isha Agarwal, Dipti Rana, Priyanshi Shah, Aayush Dude and Pooja Patel, "Optimizing Crop Monitoring: A Data Warehouse Approach in Precision Agriculture", The 15th International Conference on Computing, Communication and Networking Technologies (ICCCNT), 24 - 28 June 2024, IIT - Mandi, Himachal Pradesh, India.
Nikita, Esha Srivastav, Asthaben Patel, Anjali Singh, Riya Sharma, Dipti P Rana, Rupa G Mehta, "LAWBOT: A Smart User Indian Legal Chatbot using Machine Learning Framework", IEEE 9th International Conference for Convergence in Technology (I2CT), Pune, Maharashtra, India, 5-7 April 2024.
Prarthana J Mehta, Balu L Parne, Sankita J Patel, PF-AKA: PUF-FSM based Authentication and Key Agreement Framework for IoT based Smart Grid Networks, Cluster Computing, Springer, pp. 1-19, April 2024.

JOURNAL/CONFERENCE/BOOK PUBLICATIONS

Nidhi Joraviya, Bhavesh N. Gohil, Udai Pratap Rao, "DL-HIDS: Deep Learning-based Host Intrusion Detection System using System Calls-to-Image for Containerized Cloud Environment", Journal of Supercomputing, Volume 80, Issue 9, 2024.
Supriya Mishra, Bhavesh N. Gohil, Suprio Ray, "A survey on Persistent Memory indexes: Recent advances, challenges and opportunities", Journal of Systems Architecture, Volume 151, 103140, ISSN 1383-7621, April 2024.
Buddhawar, Gaurav, K. Jariwala, and C. Chattopadhyay. "Enhancing Book and Document Digitization from Videos: A Feature Fusion-Based Approach." International Journal of Engineering, 37, no. 3, 538-545, 2024.
Buddhawar, G., Dave, D., Jariwala, K., & Chattopadhyay, C. Predictive Analysis for Optimal Text Visibility: A Comprehensive Study on Frame-of-Interest Prediction in Book Digitization Videos. International Journal of Engineering, 2024.
M. Patel, K. Jariwala and C. Chattopadhyay, "A Hybrid Relational Approach Towards Stock Price Prediction and Profitability," in IEEE Transactions on Artificial Intelligence.
Sethi, D., Prakash, C., and Bharti, S, Estimation of lower extremity parameters for marker-less gait analysis. Multimedia Tools and Applications, 83(13), 40125-40145, 2024.
Chandan Trivedi, Keyur Parmar and Udai Pratap Rao, “PGASH: Provable Group-based Authentication Scheme for Internet of Healthcare Things”, Peer-to-Peer Networking and Applications, Springer, 17, 665 – 684, January 2024
Anamika Kumari, Sourabh Bhaskar, Shriniwas Patil and Keyur Parmar, “Decentralized and Multi-Authority based Public Key Infrastructure for Sharing Electronic Health Records”, Procedia Computer Science, Elsevier, 230, 44-54, January 2024.
S Roy, J Agrawal, A Kumar, UP Rao, “Mh-abe: multi-authority and hierarchical attribute-based encryption scheme for secure electronic health record sharing”, Cluster Computing, Springer, 1-26, 2024.
S Roy, A Kumar, UP Rao, “FTBAC: Fuzzy Trust Based Access Control for Healthcare Cross-Domain Environment”, Soft Computing, 2024.
A Chaurasia, A Kumar, UP Rao, “BACP-IeFC: Designing Blockchain-Based Access Control Protocol in IoT-Enabled Fog Computing Environment”, Cluster Computing, 2024.
Abhilasha Chaudhuri, Search Space Division Method for Wrapper Feature Selection on High-Dimensional Data Classification, Knowledge-Based Systems, Elsevier, Volume 291, Issue, Page No 111578, 2024.
Kumar, Naveen, and Shashank Srivastava. "IBPC: An Approach for Mitigation of Cache Pollution Attack in NDN using Interface-Based Popularity." Arabian Journal for Science and Engineering, Springer, vol-49, no-3, pages-3241-3251, 2024.

JOURNAL/CONFERENCE/BOOK PUBLICATIONS

Behera, S., Prakash, C., Sharma, N. A Combined Model for INDEX Price Forecasting Using LSTM, RNN, and GRU. In: Das, S., Saha, S., Coello, C.A.C., Rathore, H., Bansal, J.C. (eds) Advances in Data-Driven Computing and Intelligent Systems. ADCIS 2023. Lecture Notes in Networks and Systems, vol 890. Springer, Singapore, 2024.

Parva Patel, Patel Yash Maheshbhai, Sumeet Kamble, Bhagya Rana, Shriniwas Patil, and Keyur Parmar, "BHealth: A Blockchain Based Platform for Healthcare Data", Proceedings of the 3rd International Conference on Network Security and Blockchain Technology (ICNSBT 2024), Springer, 2024.

Naveen Kumar, Brijendra Pratap Singh, and Rohit "A Lightweight Intelligent Detection Approach for Interest Flooding Attack" (Accepted in Book "AI-Based Advanced Optimization Techniques for Edge Computing" which will be published in Wiley-Scrivener imprint).

Kashish Dineshbhai Shah, Dhaval Karshanbhai Patel, Mehul Shirishchandra Raval, Mukesh Zaveri, Shabbir N Merchant," Deep RL-based Smart Signaling using Space-Time Vehicular Features under C-V2X Scenario", Proceedings of Workshop on Intelligent Transportation Systems (ITS), 16th International Conference on COMmunication Systems & NETworkS (COMSNETS 2024), January 3–7, 2024, Bengaluru, India.

Omikumar Bhavinkumar Makadia, Dhaval Karshanbhai Patel, Kashish Dineshbhai Shah, Mehul Shirishchandra Raval, Mukesh Zaveri, Shabbir N Merchant," Millimeter-Wave Vehicle-to-Infrastructure Communications for Autonomous Vehicles: Location-Aided Beam Forecasting in 6G", Proceedings of Workshop on Connected Vehicles & Autonomous Driving, 16th International Conference on COMmunication Systems & NETworkS (COMSNETS 2024), January 3–7, 2024, Bengaluru, India.

Vivek H. Champaneria, Mukesh A. Zaveri and Sankita J. Patel, "A Secure Template Protection Technique for Robust Biometric Systems", Proceedings of IEEE Students Conference on Engineering and Systems (SCES-2024), June 21-23, 2024, Prayagraj, India.

Ekta Singh, Dev Yadav, Shaloo Singh, Mrs. Neha Kapadia, R. G. Mehta, "Route Optimization for Waste Collection Vehicles" Proceedings of International Conference on Intelligent Computing and Networking, 2024.

Isha Agarwal, Dipti Rana, Priyanshi Shah, Aayush Dude and Pooja Patel, "Optimizing Crop Monitoring: A Data Warehouse Approach in Precision Agriculture", The 15th International Conference on Computing, Communication and Networking Technologies (ICCCNT), 24 - 28 June 2024, IIT - Mandi, Himachal Pradesh, India.

Kumar Adarsh, Soundarva Kumar, Gohil Bhavesh, Sankita Patel, Rajvansh Sarang and Sanghvi H P. Forensics Analysis of TOR Browser. Proceedings of ICISPD, Lecture Notes in Electrical Engineering, Springer, pp. 331–341, 2024

JOURNAL/CONFERENCE/BOOK PUBLICATIONS

A Chaurasia, K Patel, J Vaishnav, P Patel, A Kumar, A Mandloi, UP Rao, “Blockchain based secure energy trading in V2G infrastructure”, IET Digital Library, 2024.
Abhilasha Chaudhuri, Samrudhi Mohdiwale, “Binary Rao Algorithm Based Approach for Diagnosing Alzheimer’s Disease”, 4th international conference on “Advanced Engineering Optimization Through Intelligent Techniques (AEOTIT), SVNIT Surat, Springer Nature, 2024.
Sankita Patel, Bhavesh Gohil, Naveen Kumar Chaudhari, S S Iyengar (eds), Security, Privacy and Digital Forensics. Lecture Notes in Electrical Engineering, vol 1075, Springer, 2024
Prarthana J Mehta, Balu L Parne, Sankita J Patel, ESAF: An Efficient and Secure Authentication Framework for V2G Network, 16th International Conference on COMmunication Systems and NETworkS (COMSNETS), pp. 945-952, IEEE, January 2024.
N. Kapadia, R.G. Mehta. “Smart Bin Waste Prediction” using Machine Learning Industrial Internet of Things for Responsible Technology Scopus indexed CRC Press book, June 2024.
Nikita, Esha Srivastav, Asthaben Patel, Anjali Singh, Riya Sharma, Dipti P Rana, Rupa G Mehta, "LAWBOT: A Smart User Indian Legal Chatbot using Machine Learning Framework", IEEE 9th International Conference for Convergence in Technology (I2CT), Pune, Maharashtra, India, 5-7 April 2024.

SHORT TERM PROGRAMMES ORGANIZED AT SVNIT

NAME OF FACULTY:

DR. RAGHAVENDRA PAL (ECED, SVNIT),
DR. NEHAL N. SHAH (SCET, SURAT),
DR. SURESH DAHIYA (ECED, SVNIT),
DR. DIPTI P. RANA

NAME OF PROGRAMME :

One Week Training Programme Boot Camp 7.0 on “Drone Assembly, Navigation & Applications”

Sponsoring / Agency / Self-financed:

Ministry of Electronics and Information Technology (MeitY), Government of India (GoI) conducted by SVNIT, Surat in Association with Sarvajanik College of Engineering and Technology, Surat

Period: 20th - 27th January, 2024

NAME OF FACULTY:

DR. ANAND DARJI (ECED, SVNIT),
PROF. RAHUL GONAWALA (BMC, SURAT),
DR. SURESH DAHIYA (ECED, SVNIT),
DR. DIPTI P. RANA

NAME OF PROGRAMME :

One Week Training Programme Boot Camp 5.0 on “Drone Applications"

Sponsoring / Agency / Self-financed:

Ministry of Electronics and Information Technology (MeitY), Government of India (GoI) conducted by SVNIT, Surat in Association with Bhagwan Mahavir College of Engineering and Technology, Surat

Period: 11th - 15th March, 2024

NAME OF FACULTY:

DR. ANAND DARJI (ECED, SVNIT),
DR. SURESH DAHIYA (ECED, SVNIT),
DR. DIPTI P. RANA

NAME OF PROGRAMME :

One Week Training Programme Boot Camp 6.0 on “Drone Technology and Applications"

Sponsoring / Agency / Self-financed:

Ministry of Electronics and Information Technology (MeitY), Government of India (GoI) conducted by SVNIT, Surat in Association with Bhagwan Mahavir College of Engineering and Technology, Surat

Period: 22nd - 26th April, 2024

PHD COMPLETED

SHIVANGI SHUKLA (D18CO002)

SUPERVISOR: Dr. Sankita J. Patel

THESIS TITLE: Design and Analysis of Secure Multi-factor Authentication and Data Sharing Approaches in Cloud Architecture."

VIVA-VOCE DATE: 10th January, 2024

PRESENT AFFILIATION: Assistant Professor IIIT, Pune

ANJALI S. MORE (DS15CO008)

SUPERVISOR: Dr. Dipti P. Rana

THESIS TITLE: "Novel Classification n and Enhanced Sampling based Approaches for Imbalanced Data."

VIVA-VOCE DATE: 25th January 2024

PRESENT AFFILIATION: Associate Professor, Faculty Engineering, Symbiosis Institute of Technology (SIT), Pune, Symbiosis International Deemed University, Maharashtra

TRIVEDI HIRAL SHASHANK (DS17CO002)

SUPERVISOR: Dr. Sankita J. Patel

THESIS TITLE: "Design and Analysis of Secure Data Collection, Processing and Storage Methods in Distributed IoT Systems."

VIVA-VOCE DATE: 9th April, 2024

PRESENT AFFILIATION: Security Specialist, Cybersecurity Manager-BOSCH Global Software Technologies.

RESEARCH PROJECTS

PROJECT TITLE: URBAN FLOW REVOLUTION: UNVEILING THE POTENTIAL OF AI, COMPUTER VISION, AND CLOUD FOR DESIGN AND DEVELOPMENT OF ADAPTIVE TRAFFIC CONTROL SYSTEM

CO-ORDINATORS

PRINCIPAL COLLABORATOR: DR. DIPTI P. RANA

CO - INVESTIGATOR: DR. LATABEN GADHAVI, LECTURER, INFORMATION TECHNOLOGY DEPARTMENT, GOVERNMENT POLYTECHNIC GANDHINAGAR

Grant Sanctioned: 4.95 Lakhs

Duration: 3 Years

Date of Allotment: 29th February 2024

Status: By Research Promotion Under Technical Education-STEM Directorate of Technical Education, Gandhinagar

PROJECT TITLE: INFORMATION SECURITY EDUCATION AND AWARENESS PROJECT PHASE-III

CO-ORDINATORS

PRINCIPAL INVESTIGATOR: PROF. D. C. JINWALA

CO - INVESTIGATOR: DR. SANKITA PATEL

Grant Sanctioned: Total Central Project Outlay: Rs 332.74 crore (amongst all the selected institutes/universities)

Duration: 5 Years

Date of Allotment (1st Installment): 19th June 2024 (Rs 47.80 Lakh)

Status: Ongoing

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY
ICHCHHANATH, SURAT – 395007

NEWSLETTER DESIGN COMMITTEE:
DR. SANKITA J. PATEL
KARISHMA A. PATEL