SVNIT
NEWSLETTER
February 2023, Issue-VIII

संगणक विज्ञान एवं अभियांत्रिकी विभाग
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Department Mission

Impart education that encourages students to read critically, reason analytically, communicate persuasively, apply professionally and prepare them to excel in the field of computing.

Department Vision

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

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Message from Head of the Department

Dr.Rupa G. Mehta

There is no alternative of the hard work and there are no shortcuts to success. "Success is the sum of small efforts, repeated day in and day out. – Robert Collier". So set the goal, without waiting for the opportunities to reach to you start working to reach the goal and keep putting your wholehearted efforts till you reach the goal. We must consider every lesion of the life important, may be not important toddy but will make us ahead to the future opportunities and challenges. Best wishes to all the budding engineers for the success in coming exams and a successful future.

Dr. Rupa G. Mehta
Associate Professor & Head,
DoCSE, SVNIT, Surat
Email: hod@coed.svnit.ac.in

Faculty Development Program (FDP) Organized: ATAL FDP SMSNDM, January 2-13, 2023

The Department of Computer Science and Engineering, S. V. National Institute of Technology (SVNIT), Surat has organized AICTE TRAINING AND LEARNING (ATAL) Faculty Development Program (FDP) on "Social Media and Social Network Data Mining (SMSNDM)" from 2nd January 2023 to 13th January 2023 in hybrid mode, coordinated by Dr. Rupa G. Mehta and Dr. Dipti P. Rana.

The FDP was inaugurated on 2nd Jan 2023 by Dr. Anupam Shukla, the Honorable Director, SVNIT. Further the participants were welcomed by Dr. Ravikant (Dean Student Welfare, SVNIT) and Dr. M. A. Zaveri (Dean Academic, SVNIT) at the DoCSE, SVNIT on 9th January 2023 for the offline sessions.

The eminent speakers from various profound institutes like Dr. Tanmoy Chakraborty (IIT Delhi), Dr. Joydeep Chandra (IIT Patna), Dr. Animesh Mukherjee (IIT Kharagpur), Dr. Pawan Goyal (IIT Kharagpur), Dr. Bharat Tidke (MIT World Peace University, Pune), Dr. Dipti Rana (SVNIT, Surat), Dr. Bhavesh Gohil (SVNIT, Surat) and Dr. Kamal Thakur (TCET, Mumbai) delivered the expert talks and shared their expertise in the field of Social Media Mining and various applications domains. The eminent professors from foreign universities like Dr. Bing Liu from University of Illinois Chicago, USA and Dr. Padmanabhan from Queen's University Belfast, UK have opened up the future directions in the social media mining.
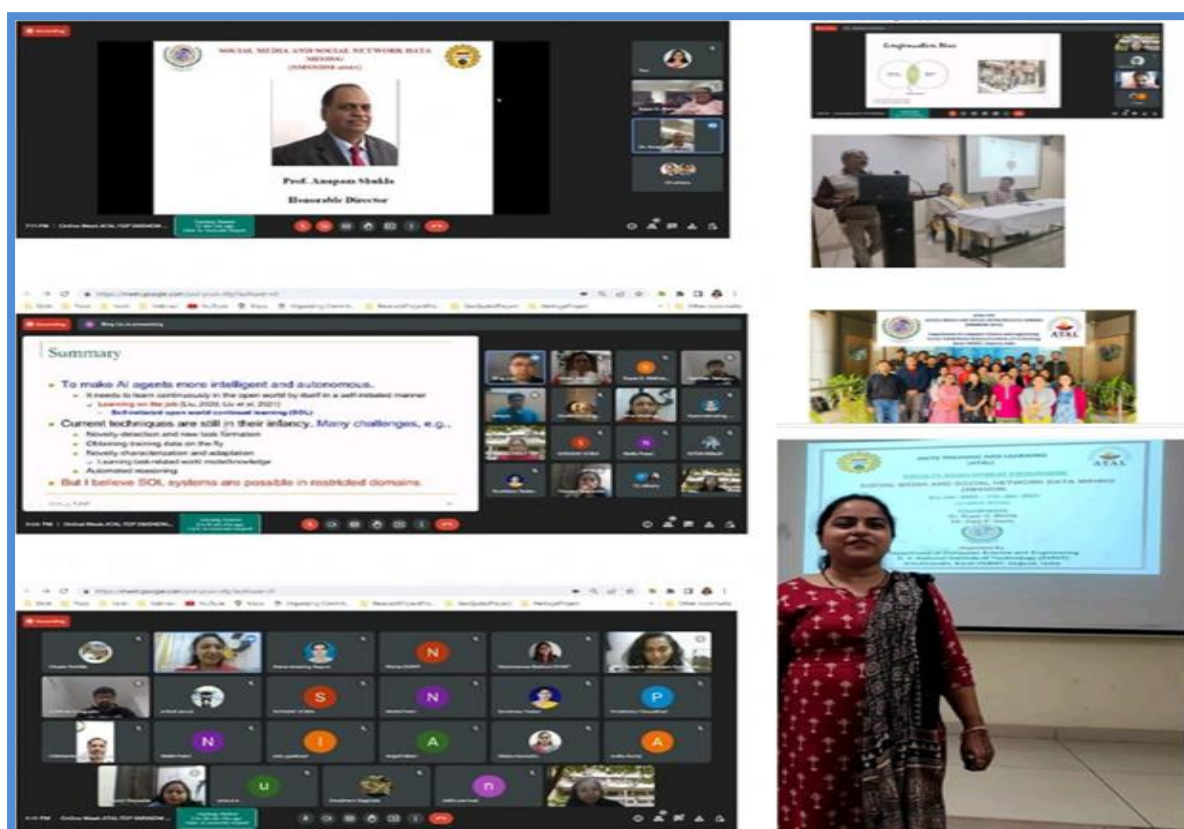
International Conference Organized: ISPDA 2022, December 13-15, 2022

The department of Computer Science and Engineering organized the Second International Conference on Security, Privacy and Data Analytics (ISPDA 2022) during December 13-15, 2022.

The objective of this conference was to bring together researchers from industry and academia who are working in the field of security, privacy and data analytics from both technological and social perspective.
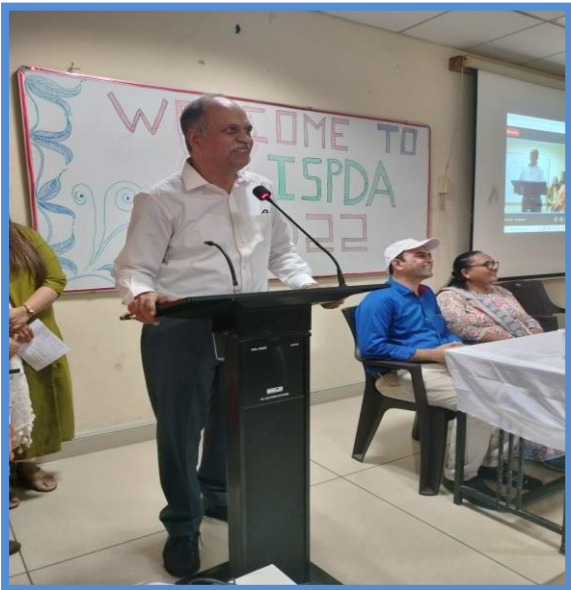
The proceedings of the conference are going to be published by Springer in their prestigious Lecture Notes in Electrical Engineering (LNEE) series. The LNEE series is indexed by Scopus.

Authors from national and international institutes and industries participated and presented their manuscripts during the conference.

Following key note speakers shared their knowledge with the participants of the conference:

1. Prof. Mohammad Obaidat, Distinguished Professor, King Abdullah II School of Information Technology, University of Jordan, Amman 11942, Jordan, University of Texas-Permian Basin, USA, University of Science and Technology Beijing, Beijing 100083, China.

2. Dr. Zia Saquib, Senior Vice President- Technology Innovation Department, Reliance Jio.

3. Dr. Gaurav Gupta, Scientist 'E'/Additional Director with the Ministry of Electronics and Information Technology (MeitY), Government of India.

4. Prof. Balasubramanian Raman, Professor, Department of Computer Science and Engineering, IIT Roorkee.

5. Dr. Ravinder Singh, Modernizing Technology Programme Manager, UK Cabinet Office – Central Digital and Data Office (CDDO), London.

6. Dr. Padmaja Joshi, Senior Director, Centre for Development of Advanced Computing (C-DAC), Mumbai

Glimpses of ISPDA 2022, December 13-15, 2022

International Conference Organized: ICISPD 2022, December 2-3, 2022

The Department of Computer Science and Engineering conducted a two days International Conference on Security, Privacy and Digital Forensics during December 2-3, 2022. The conference was jointly organized by National Forensics Sciences University, Goa, SVNIT Surat and BITS Pilani, Goa. The conference was hosted by NFSU Goa. The proceedings of the conference are going to be published by Springer in their Lecture Notes of Electrical Engineering (LNEE) book series. The conference was inaugurated by Dr. Pramod Sawant, Honorable Chief Minister of Goa.

Events Organized: Google Winter of Code'23, January 2023

Google Developer Student Club of SVNIT managed by students of Department of Computer Science and Engineering conducted the "Google Winter of Code'23", an eleven days long event.

The event was conducted in the month of January 2023 where second-year students were mentored by third-year students to develop projects for Cafeterias, bakeries, and local businesses in Surat. Google DSC collaborated with Dostean, A1 bakery, Farm to Table, Koselig, Adworks and That gingerart.

Mr. Meet Zaveri, the Founder and CEO of Digineer conducted a seminar on "The hacks of Digital Marketing and Brand Building".

With 200+ participants developing commendable websites, the closing ceremony was conducted on 21st January 2023. The closing ceremony was also graced by Dean SW, Dr. Ravikant, Faculty Advisor, Dr. Dipti Rana, the business owners, and a crowd of 250 students.

The event witnessed a huge turnout and the students went back with a project they developed for real-world problem statements.

PhD Completed

Mr. G. B. Jethava (D18CO004) defended his PhD thesis titled "Security and Trust Management Approaches for Online Social Networks" in October 2022. He worked under the supervision of Dr. Udai Pratap Rao, Assistant Professor, Department of Computer Science and Engineering.

Mrs. Rutul Mahajan (DS15CO004) defended her PhD thesis titled "Computational Humor and Emotion Recognition in Multilingual Context using Semantic based Analysis" in December 2022. She worked under the supervision of Prof. Mukesh A. Zaveri, Professor of Computer Science and Engineering.

Faculty Achievement

Prof. Mukesh A. Zaveri is appointed as Dean Academic of the institute with effect from 9th January 2023.

Expert Lectures Delivered by Faculty Members

1. Dr. Mukesh A. Zaveri delivered talk on **"Sport Video Summarization using Bayesian Network"** during Six Days STTP on Artificial Intelligence for Computer Vision Applications organised by Department of Computing Technologies, School of Computing, College of Engineering and Technology, SRM Institute of Science and Technology, in association with ACM-W Chennai Chapter, SRM Nagar, Tamil Naidu on 29 July 2022.

2. Dr. Mukesh A. Zaveri delivered talk on **"Introduction to Machine Learning and Recent Trends"** on Machine Learning and IoT, funded by GUJCOST, DST Govt. of Gujarat and organized by Computer Science and Engineering Program, School of Technology, GSFC University, Vadodara, on 14 November 2022.

3. Dr. Mukesh A. Zaveri delivered talk on **"Deep Learning and its Applications"** on Machine Learning and IoT, funded by GUJCOST, DST Govt. of Gujarat and organized by Computer Science & Engineering Program, School of Technology, GSFC University, Vadodara on 14 November 2022.

Research Publications

1. Himanshu Gajera, Deepak Ranjan Nayak and Mukesh A. Zaveri "**Towards Exploring Deep Features for Efficient Melanoma Diagnosis in Dermoscopic Images",** Proceedings of IEEE OITS International Conference on Information Technology, Bhubaneswar, Odisha, India, December 4th - 16th 2022.

2. Dilay Parmar and Udai Pratap Rao, **"Privacy-Preserving Enhanced Dummy-Generation Technique for Location-Based Services"**, Concurrency and Computation: Practice and Experience, Wiley, 2022.

3. Ankur O. Bang, Andrea Viscontian, Alessandro Brighente, Mauro Conti and Udai Pratap Rao **"AnIoT Inventory Before Deployment: A Survey on IoT Protocols, Communication Technologies, Vulnerabilities, Attacks, and Future Research Directions"**, Computers & Security, Elsevier 2022.

4. Gordhan B. Jethava and Udai Pratap Rao, **"A Novel Defense Mechanism to Protect Users from Profile Cloning Attack on Online Social Networks (OSNs)"**, Peer-to-Peer Networking and Applications, 2022.

5. Shikhar Sarang, Dhruv Rana, Smit Patel, Darshil Savaliya, Akhil Chaurasia, and Udai Pratap Rao **"Document Management System Empowered by Effective Amalgam of Blockchain and IPFS"**, Procedia Computer Science 2022.

6. Divya Jyoti, Prarthana J. Mehta, Balu L. Parne and Sankita J. Patel **"ALKAF: An Anonymous Lightweight Key Agreement Framework for Smart Grid Network"**, IEEE 19th India Council International Conference (INDICON-2022), Organized at Cochin University of Science and Technology (CUSAT), Kochi, Kerala, 24th - 26th November 2022.

7. Mansi Singhal, Prarthana J. Mehta, Balu L. Parne and Sankita J. Patel **"Device Fingerprinting Based Multifactor Authentication in LoRa Device"**, IEEE 19th India Council International Conference (INDICON-2022), Organized at Cochin University of Science and Technology (CUSAT), Kochi, Kerala, 24th - 26th November 2022.

8. Pranita Mahajan and Dipti P. Rana, **"Standardization and Context-Specific Named Entity Linking of Electronic Medical Records"**, "2nd

International Conference on Emerging trends and Innovations" organized by SCTRs, PICT Pune, 10th - 12th March 2022.

9. V. V. Rathod, Dipti. P. Rana and Rupa. G. Mehta, **"An Extensive Review of Deep Learning Driven Remote Sensing Image Classification Models", "Third International Conference on Intelligent Computing Instrumentation and Control Technologies (ICICICT)",** Kannur, India 2022.

10. Charmi Shah, Yamini Kabra, Ummulkiram Daginawala, Pranjal Tibrewal and Dipti P. Rana, **"Hierarchical Earthquake Prediction Framework", "International Conference on Paradigms of Communication, Computing and Data Sciences (PCCDS)"**, Organized in Virtual Format by Malaviya National Institute of Technology Jaipur, India, July $5^{th} - 7^{th}$, 2022.

11. Hiral Trivedi and Sankita J. Patel, **"Key-aggregate searchable encryption with multi-user authorization and keyword untraceability for distributed IoT healthcare systems"**, Transactions on Emerging Telecommunications Technologies, pages-e4734, January 2023.

12. Hiral Trivedi and Sankita J. Patel, **"Homomorphic cryptosystem-based secure data processing model for edge-assisted IoT healthcare systems",** Internet of Things Journal, vol. 22, 100693, Elsevier.

13. Hiral Trivedi and Sankita J. Patel, **"Dynamically scalable privacy-preserving authentication protocol for distributed IoT based healthcare service providers"**, Wireless Networks, pp. 1-25, December 2022, Springer.

14. Bintu Kadhiwala and Sankita J. Patel, **"Privacy-preserving collaborative social network data publishing against colluding data providers"**, International Journal of Information and Computer Security, vol. 19, no. 3-4, pp.346-378, Inderscience Publishers.
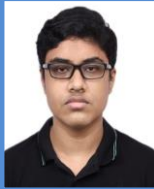
Student Achievements

Shivangi Shukla (D18CO002) has joined C-DAC Pune as Knowledge Associate.

Hiral Trivedi (D17CO002) has joined Bosch Global Software Technologies Pvt. Ltd. (BGSW), Pune as Security Specialist. The current role assigned to her is Project Security Manager (PSecM).

Divy Awasthi (U21CS026) secured 1st position in the All India Inter NIT Tournament of Badminton at NIT Silchar during 18-20 November 2022.

Phani Aditya (U21CS028) has participated in the All India Inter NIT Tournament of Chess at NIT Silchar during 18-20 November 2022.

Dharita Chaudhari (U19CS096) secured Runner up position in All India Inter NIT Tournament of Athletics (400 meter running and Long jump).

Shashwatha Karkera (U19CS105) secured Runner up position in All India Inter NIT Tournament of Volleyball (Women).

Dhyey Thakkar(U19CS085) secured Bronze medal (3rd place) in All India Inter NIT Tournament of Lawn tennis.

Garvit Shah (U21CS089) secured 3rd position and prize of of Rs. 10,000/- at Tech Expo organized by Tarun Mitra Mandal and presented by Navneet. He made a self-sustainable solar powered e-bicycle prototype working model.

Student Achievements

Aditi Sadadiwala (U21CS003) is the winner of GWOC 23

Dharmil Vinubhai Halpati (U22CS049) scored in top 15% in LinkedIn skill assessment test in C language and scored top 30% in HTML.

Pakhi Srivastava (U20CS059) is selected for LinkedIn CoachIn 3.0 program. She is the winner of JPMC Code for Good.

Oza Jeetkumar Vishnubhai (U20CS003) is selected in Top 45 teams in INAE-SERB IITJ Youth-Conclave hackathon. He is also selected in Top 50 teams in Dotslash 5.0 and completed GCCP google cloud skill boost program.

Shrey Patel (U20CS030) is selected as a GDSC (Google developer student club) Lead for SVNIT campus 2022-23. He is selected in Top 45 teams in INAE-SERB IITJ Youth-Conclave hackathon. He secured5th rank in CodeRush Coding Challenge hosted in NIT Surat. He is selected in Top 50 teams in Dotslash 5.0 hackathon conducted by ACM NIT.

Misbah Shaikh (U22CS043) is selected to PROMYS India 2023 at IISC Bangalore for a mentored Mathematics research project.

Anubhuti Jain (U21CS016) is the winner of Google Winter of Code Contest.

Shubh Suthar (U21CS037) has won the 2nd prize at the DEVHEAT hackathon, conducted by the IIIT-Surat. He along with his team is qualified for the final round of the Azadika Amrit Mahotsav hackathon, organized by the Government of Gujarat.

Association for Computing Machinery (ACM) Club, SVNIT

ACM Summer Challenge was a month-long coding marathon held between 7th June 2022 to 11th July 2022 as an attempt to spread awareness on competitive programming for the beginners where the participants learn as they go. It was hosted on the HackerEarth platform. The entire event was divided into several tracks where problem sets on each track were released in intervals of three or four days. Before the set release, a curated list of resources with practice problems had been released for contestants to practice before competing. A mammoth participation of over 400 students was received from SVNIT. The winners of ACM Summer Challenge 2022 were: 1) Rahul Kumar Singh, 2) Harsh Singh, 3) Vivek Kumar

Epiphany 12.0 is a national-wide coding contest conducted on the 11th of November. It was a competitive coding contest, hosted on the Code Forces platform, consisting of 8 coding problems, with a maximum time of 3 hours to solve and submit the solution. 400 students from several colleges all across the country participated. The winners of Epiphany 12.0 were: 1) Shubham Bhadada (SVNIT, Surat, Gujarat), 2) Harsh Malvi (SVNIT, Surat, Gujarat), 3) Manan Dahiya (Manipal Institute of Technology, Manipal, Karnataka)

Inception 7.0is one of ACM's most distinguished events to promote a competitive coding culture within the sophomore students of SVNIT held on 10th September 2022 on CodeForces platform with a participation of over 150 students. The participants were supposed to solve 6 competitive coding problems in a 3-hour time span. The chief motive was to introduce the important concepts of DSA and help students develop a knack of problem solving in pressure situations like a coding interview. The winners of Inception 7.0 were 1) Bharat Bhammar, 2) Kaushik Bhowmick, 3) Phani Aditya
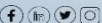
Association for Computing Machinery (ACM) Club, SVNIT

The workshop on Git/GitHub & Open-source was held on 18th September 2022 at the Department of Computer Science and Engineering, SVNIT. The workshop kicked off with attendees receiving a free Gitcheatsheet provided by GitHub in collaboration with ACM. Before the start of the event, students were mailed an installation guide on Git/GitHub along with a basic overview of the technology. The event was presided by ACM speakers Vishvesh Trivedi and Sneharsh Belsare, who addressed a crowd of over 120 students from SVNIT. The workshop included understanding the concept of version control systems, introduction to Git basic and advanced commands, introduction to GitHub, and a brief overview on the world of open-source contribution. It was an interactive workshop where ACM Moderators were present for live doubt solving to ensure a smooth code-along process.

It is a global movement introducing tens of millions of students worldwide to computer science, inspiring kids to learn, breaking stereotypes, and leaving them feeling empowered. It aims to explain the importance of Computer Science in our daily lives and in various fields, to students of class 9 to class 12, through presentations conducted in virtual mode. Apart from this, we also encourage the students to gain more knowledge in the Computer Science field. This year ACM executives visited schools of Surat like SD Jain, SVP, Essar International, Alchemy and Navrachana School, Vadodara and conducted an hour-long programming activity for the students during 5th-11th of December.

ACM NIT-SURAT PRESENTS

HOUR OF CODE

As a celebration of the computer science week between 5th-11th Dec.

Our Executives visited schools in Surat and Vadodara and conducted an hour-long programming activity for the students.

Swipe to view photos

THANK YOU TEAM!

Alchemy School	SD Jain School	SVP School
Khushi Kher	Garvit Shah	Raj Modh
Aditi Sadadiwala	Bhavya Hirani	Yash Baldev
Radhika Jajoo	Mohammad Ansah	Ranjana Soni
Vedant Surti	Shubh Suthar	Aditi Tapariya
Anubhuti Jain	Pragnesh Barik	Pranshi Lavti
	Yash Pokar	Rushil Jariwala

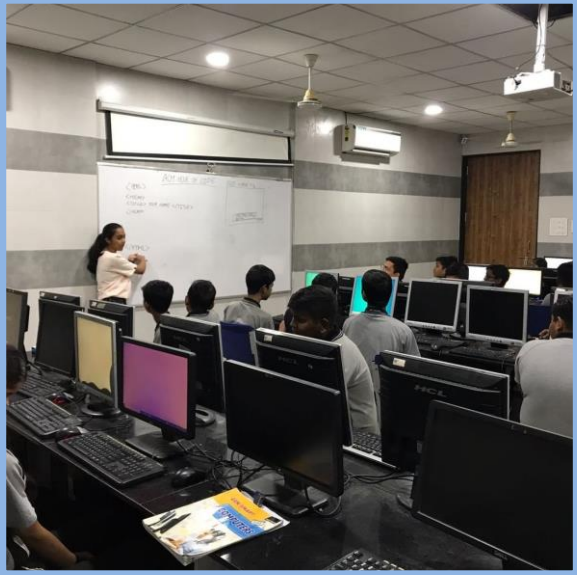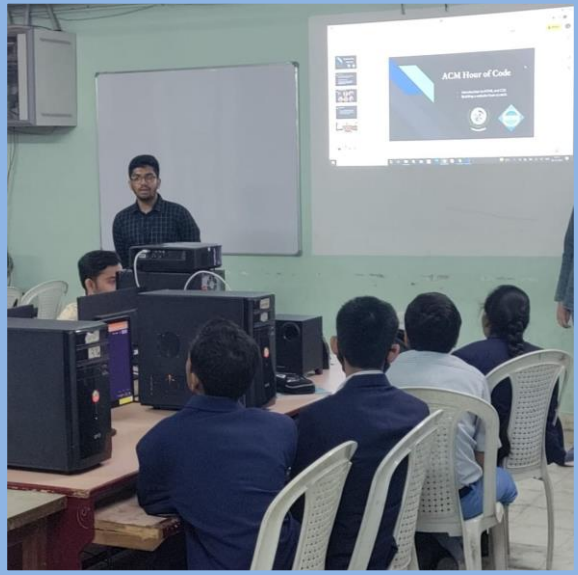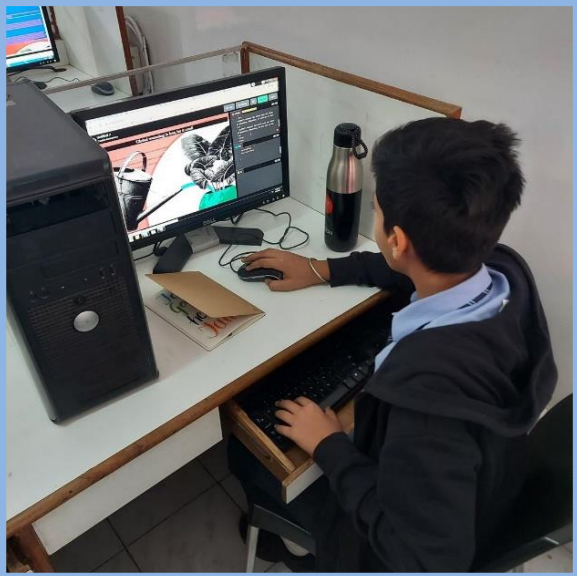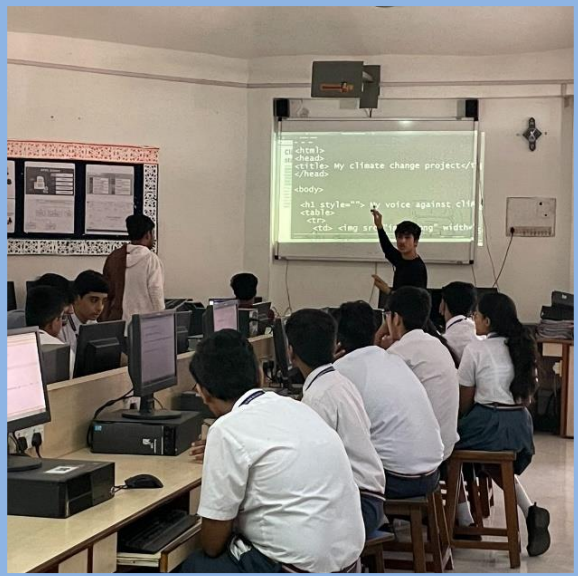| Essar International	Navarachana School
Feny Patel	Ved Chadderwala
Kratik Jain	Muskan Vedi
Abhinav Gupta	Swayam Desai
Mihirsinh Chauhan	Henil Thaker
Aryan Pal	Param Shah
Jaswanth Reddy	Darshan Patel

ACM Executive Volunteers for Hour of Code 2022

Association for Computing Machinery (ACM) Club, SVNIT

Sad Demise of Department Staff

The department is deeply saddened to lose one of its peons Mr. Vinod Valmik on 28th January, 2023. The unexpected passing of Mr. Vinod Valmik is a significant loss to the department and the Institute. Mr. Vinod Valmik was working in the department since more than 7 years. Our sincere sympathy and condolences to his family. His contribution to the department could never be forgotten.

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