



**Sardar Vallabhbhai National Institute of Technology,
Surat**

NEWSLETTER

Issue-1 OCT-2024

DEPARTMENT OF ARTIFICIAL INTELLIGENCE Sardar Vallabhbhai National Institute of Technology, Surat



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VISION

**Global excellence in fostering ethical AI innovation
for social good**

MISSION

- To impart quality and value-based technical education with fundamentals in the field of AI.
- To provide rigorous and interdisciplinary education programme.
- To integrate ethical consideration into AI research development and deployment practices.
- Collaborate with industry and to encourage entrepreneurship skills to apply AI innovation in real world scenarios.

MESSAGE FROM HOD

Welcome to the Department of Artificial Intelligence at SVNIT!

As the Head, I am honored to lead a team of passionate faculty members, students and scholars who are dedicated to advancing the frontiers of a transformative era where data and intelligence converge to shape the future. From developing AI-driven solutions for healthcare, finance, and sustainability to exploring the ethical and societal implications of AI technologies, our research spans a wide spectrum of disciplines and applications. I welcome collaborations with industry partners, fellow academics, and policymakers to address some of the most pressing challenges facing society today.



Professor & Head
Department of Artificial Intelligence
Email: hod@aid.svnit.ac.in

ACADEMIC PROGRAMMES

- **B.Tech in Artificial Intelligence**
Total intake-156 students
- **Integrated Postgraduate in Artificial Intelligence**
Total intake-30 students
- **Doctor of Philosophy**

OUR FACULTY MEMBERS



Dr. Rahul Dixit

Assistant Professor

Research Area: Machine learning, Computer Vision, Digital Image Processing, Document Authentication, Medical Image Authentication, Signature Authentication, Digital Image and Video Forensics, Information Retrieval, Natural Language Processing.



Dr. Tanmoy Hazra

Assistant Professor

Research Area: Machine Learning, Deep Learning, Applications of Game Theory

OUR FACULTY MEMBERS



Dr. Nitesh A. Funde

Assistant Professor

Research Area: Data Science, Machine Learning, Classical Optimization Techniques, Smart Grids, Sustainable Cities, Cyber-Physical Systems



Dr. Praveen Kumar Chandaliya

Assistant Professor

Research Area: Biometrics, Face Recognition, Medical Imaging, Computer Vision, Generative AI

OUR FACULTY MEMBERS



Dr. Pruthwik Mishra

Assistant Professor

Research Area: Natural Language Processing, Word Problem Solving, Computational Linguistics, Machine Translation, Summarization, Large Language Models, Speech to Speech Machine Translation, Machine Learning, Deep Learning, Hate Speech Detection, Natural Language Understanding, Shallow Parsing, Dependency Parsing, Sentiment Analysis, Tool Development for Indian Languages



Dr. Rohit Kumar

Assistant Professor

Research Area: Optimization Techniques, Approximation Algorithms, Algorithms, and Applications.

PUBLICATIONS

□ Journal:

- P. Nimbhore, M. Yadav, R. Tiwari, T. Hazra, A survey of cotton crop disease detection and classification using ORC-NET segmentation and deep learning models, *Industrial Engineering Journal*, Vol. 53, Issue 2, 2024
- P. Nimbhore, R. Tiwari, T. Hazra, M. Yadav, Classification of Cotton Crop Disease using Hybrid Model and MDFC feature extraction method, *Journal of Phytopathology*, 2024 (Accepted).
- Panda, D.S., Dixit, R., Dixit, A. *et al.*, Mathematical Model and AI Integration for COVID-19: Improving Forecasting and Policy-Making. *SN COMPUT. SCI.* 5, 246, 2024.

PUBLICATIONS

❑ Journal:

- Subrit Dikshit, Rahul Dixit, and Abhiram Shukla. Review and analysis of state-of-the-art NLP models, International Journal of Systems, Control and Communications, Vol. 15, Issue pp 48-78, 2024.
- V. Mujadia, P. Mishra, D. Sharma, Disfluency Annotated Corpora for Indian English in Technical Domains, Language Resources and Evaluation Journal, 2024.

PUBLICATIONS

□ Conference:

- S. Todmal and T. Hazra, Text guided image manipulation using LiT and StyleGAN2, 3rd ICCML, USA, 2024
- Praveen Kumar Chandaliya, Kiran Raja, Raghavendra Ramachandra, Zhaid Akthar, Christoph Buch, Towards Inclusive Face Recognition Through Synthetic Ethnicity Alteration, The 18th IEEE International Conference on Automatic Face and Gesture Recognition, 1-8, May 2024 Istanbul, Turkey
- S. Veerakumar, R. Dattangire, N. Funde and U. Balande, A New Hybrid RNN-LSTM Method for Predicting the Health Insurance Prices, IEEE International Conference of Emerging Technologies (INCET), Belgaum, India 2024

PUBLICATIONS

❑ Conference:

- P. Chandaliya, K. Raja, H. Zhang, R. Ramachandra, and C. Busch, Synthetic Ethnicity Alteration for Diversifying Face Datasets, 16th IEEE INTERNATIONAL WORKSHOP ON INFORMATION FORENSICS AND SECURITY (WIFS), Dec 2, 2024 (Accepted).

PUBLICATIONS

❑ **Book:**

- T. Hazra, K. Anjaria, A. Bajpai and A. Kumari, Applications of game theory in deep learning, 1st Edition, Springer Cham, 2024

❑ **Book Chapter:**

- P. Nelapati, N. Funde , A. Viswanadapalli, K. Jain and M. Dhabu. (2024). Security Enhancement of Smart Grids Using Blockchain Technology. In Data Management and Security in Blockchain Systems, Bentham Science.

FACULTY ACHIVEMENTS



Author	Dr. Tanmoy Hazra
Title	Applications of game theory in deep learning
Publication Type	Book
Publisher	Springer
Publishing Year	2024

STUDENT ACHIVEMENTS

NAME	ACHIVEMENT
<ol style="list-style-type: none"> 1. Driti Rathod 2. Jeet Gupta 3. Akshat Agarwal 	Siphon - Aahat, 1 st Rank
<ol style="list-style-type: none"> 1. Devang vala 2. Utkarsh Pandey 	CEV Escapify , 1 st Rank
<ol style="list-style-type: none"> 1. Archit Savaliya 2. Kuruv Patel 3. Jeet Gupta 4. Divyaksh Chachan 	Nexus Sturff Football 1 st Rank, Unity Cup football 1st Runner Up , Inter year 1st runner up
<ol style="list-style-type: none"> 1. Aryan Shah 2. Harsh Kasundra 3. Divyaksh Chachan 4. Kanahaiya Chhapparwal 	Secured 3 rd Position in the Nexus Riddlefuse
<ol style="list-style-type: none"> 1. Bhavya Usha 	Secured 3 rd position in Football (W) in the All India inter NIT tournament 2023-24 organized by NIT Rourkela

STUDENT CORNER



EXPERT TALK ORGANIZED



February 2024
Delivered by Prof. Swagatam Das
Professor, Indian statistics Institute,
Kolkata, India

**“From AI to AGI: Navigating the
transformative landscape of
generative AI in the era of Large
Language Models”**

and

**“Quality Research and getting
published: a dream journey for
young researchers”**



EXPERT TALK ORGANIZED



29 July 2024
Delivered by Dr. Rahul Mishra,
Associate
Professor, IIIT Hyderabad, India.

**“Misinformation and deception
detection on the web”
and
“Glimpse of my current research
and future prospects”**

INDIA'S TECHADE- CHIPS FOR VIKSIT BHARAT

- Semiconductor Mission has been setup by the Government of India to create an end-to-end semiconductor ecosystem to enable the nation to become a significant player in the global semiconductor industry and for Vikshit Bharat.
- The Faculties and students of department of artificial intelligence, SVNIT, Surat has witnessed the foundation stone event in virtual mode on 13th March ,2024.



STTP ON RECENT ADVANCEMENTS IN ARTIFICIAL INTELLIGENCE AND ROBOTICS (RA-AIR-24)

- This event was organized by the Department of Computer Science and Engineering and Artificial Intelligence and technically sponsored by Computational Intelligence and Smart Motion Robotics Group at SVNIT Surat from 08-13 July 2024. The event aimed to delve into the transformative impacts of AI and robotics across various industries and foster practical learning in cutting-edge technologies. The number of participants attended this STTP was 45.
- The STTP covered a comprehensive range of topics including:
 - Introduction to Artificial Intelligence and Deep Learning
 - Advances in Robotics, including navigation and path planning
 - Deep Generative Adversarial Networks (GANs) and Graph Neural Networks
 - Applications of AI in Computer Vision and Robotics
 - Hands-on sessions utilizing Python, PyTorch, and Keras for practical implementation



MASS PLEDGE AGAINST DRUG ABUSE

- Dr. Virendra Kumar, is conducting a mass Pledge against Drug Abuse on 12 August 2024, at 9 AM. The Faculties and students of department of artificial intelligence, SVNIT, Surat has witnessed to be the part of Nasha Mukta Bharat Abhiyaan (NMBA).

*“Viksit Bharat ka Mantra,
Bharat ho Nashe se Swatantra.”*



MASS PLEDGE FOR SWACHHATA PAKHWADA

- Mass Pledge for Swachhata Pakhwada on 2 september 2024, at 5 PM. The Faculties and students of department of artificial intelligence, SVNIT, Surat has witnessed to be the part of Swachhata Pledge.



NEW PROGRAMMME

- In 2024, we have introduced the Integrated Postgraduate program at Artificial Intelligence department, SVNIT.
- We are planning to start six AI centers which will provide training and boost research in the field of Textile industry, Diamond industry, Sports, etc.