SES
SHIRPUR EDUCATION SOCIETY

R. C. PATEL INSTITUTE OF TECHNOLOGY

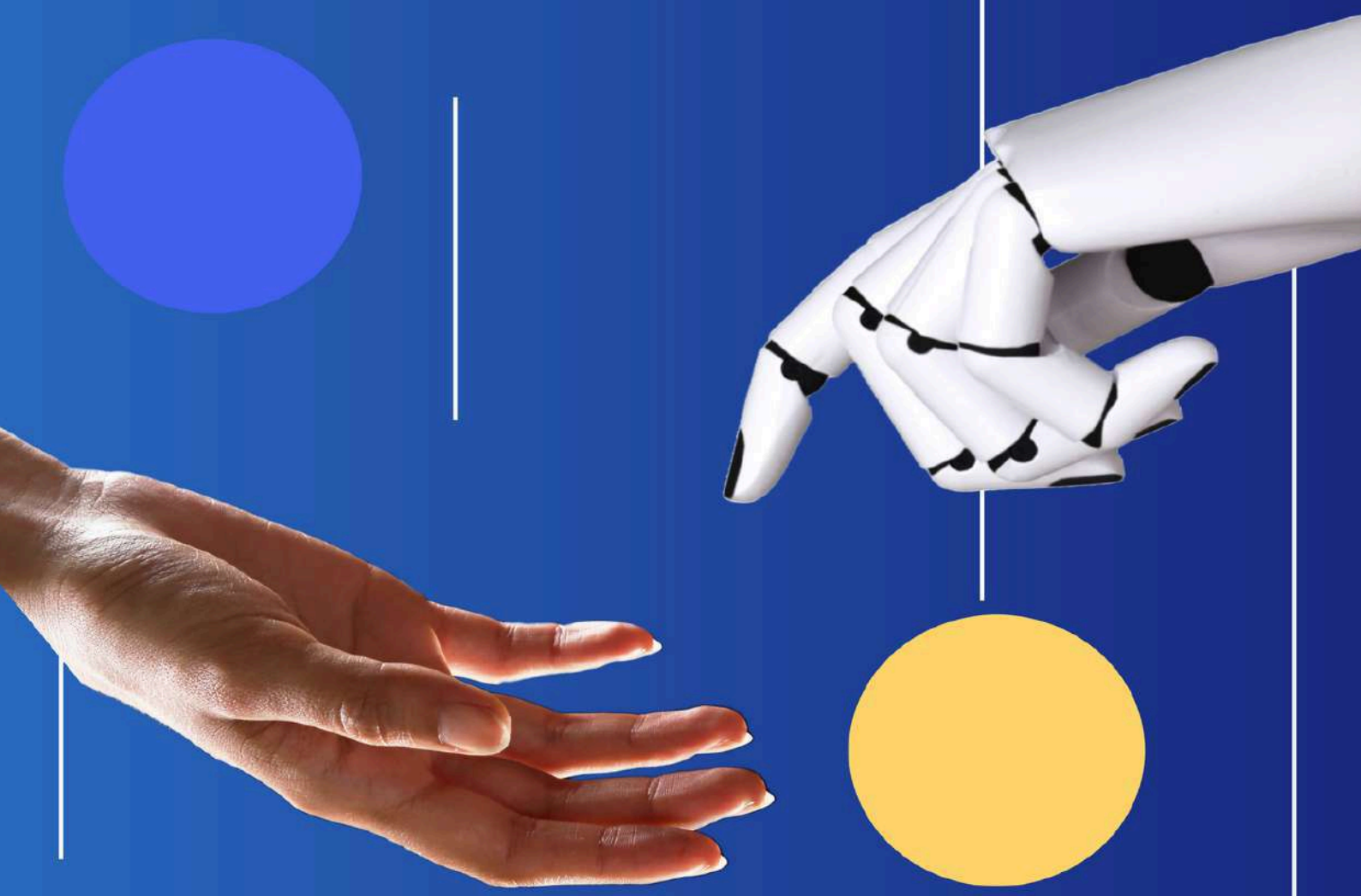
An Autonomous Institute

Approved By AICTE, New Delhi and Govt. of Maharashtra (DTE: EN - 5172)

Accredited by NAAC 'A' Grade, Bangalore.

Department of Computer Engineering

FEB-2023 TO MAY-2023



The CompVoice

News Letter for A.Y. 2022-23

www.rcpit.ac.in

R. C. Patel Institute of Technology
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Vision of the Institute

To become a leading Institute in Technical education fostering innovation, research, ethical values, and sustainable development for the betterment of society.

Mission of the Institute

To impart high quality Technical Education through:

M1. Innovative and Interactive learning process and high quality, globally recognized instructional programs.
M2. Fostering a collaborative scientific temper among students with ethical responsibility towards the society.
M3. Preparing students from diverse backgrounds to have aptitude for employment, entrepreneurship and research with a spirit of Professionalism.
M4. To contribute to nation's sustainable development.

Vision of the Department

To provide high quality Computer Engineering education with socio-moral values.

Mission of the Department

M1 To provide state-of-the-art ICT based teaching-learning process.
M2 To groom the students to become professionally sound computer engineers to meet emerging needs of industry and society.
M3 To make the students employable professionals by inculcating ethical values.

Program Educational Objectives (PEOs) of the Department

PEO1 Graduates will have technical proficiency, lifelong learning skills to become a professional, entrepreneur and leader.
PEO2 Graduates will function effectively in diverse cultural and professional environments, respecting societal perspectives and inclusive practices.
PEO3 To foster ethical and social values to be socially responsible human being.

Program Specific Outcomes (PSOs)

PSO 1 Apply programming principles, algorithms, and data structures to design efficient software solutions and intelligent systems using structured, object-oriented, and emerging technologies.
PSO 2 Design, develop, and deploy responsive web and mobile applications integrated with databases and cloud platforms, leveraging modern frameworks and tools for digital transformation.

R. C. Patel Institute of Technology
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From the Director's Desk



Dear Students, Faculty Members, Staff, Parents, and Esteemed Stakeholders,

I am pleased to reflect on the Academic Year 2022–2023, which marked steady academic progress and continued commitment to quality education at R. C. Patel Institute of Technology, Shirpur.

Throughout the year, the institute remained focused on promoting academic excellence, innovation, and professional ethics. Our dedicated faculty members played a key role in delivering effective teaching and mentoring, while continuously enhancing their academic and professional competencies.

Students actively participated in academic and co-curricular activities, which encouraged skill development, teamwork, and leadership. These experiences complemented classroom learning and helped prepare them for future professional challenges.

We also continued efforts to strengthen industry interaction and promote skill-oriented learning, ensuring our students are well-prepared for a dynamic and competitive environment.

I sincerely appreciate the efforts of our faculty, staff, students, and the continued support of parents and stakeholders. Let us move forward with confidence and determination to achieve greater milestones in the years ahead.

Warm regards,
Prof. Dr. Jayantrao B Patil
Director
R. C. Patel Institute of Technology, Shirpur

R. C. Patel Institute of Technology
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From the HOD's Desk



It gives me great pleasure to share a brief reflection on the activities and progress of the Department of Computer Engineering during the Academic Year 2022–2023.

Throughout the year, the department remained focused on promoting academic excellence, technical competence, and continuous learning. Through various academic initiatives, technical events, workshops, and student activities, we encouraged the development of problem-solving skills, innovation, and professional readiness among our students.
The consistent efforts of our faculty members played a vital role in maintaining high academic standards and guiding students toward holistic development. I sincerely appreciate the active participation and dedication of our students, which contributed significantly to the department's achievements.

I extend my heartfelt thanks to the faculty, staff, and students for their commitment and teamwork. I am confident that our collective efforts will continue to strengthen the department and prepare our students to meet future technological challenges with confidence.

With best wishes,

Prof. Dr. Nitin N. Patil
Head, Department of Computer Engineering
R. C. Patel Institute of Technology, Shirpur

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Editorial Board Message



Dear Readers,

With great enthusiasm, I am pleased to present the Department Magazine of Computer Engineering for the academic year 2022–23. This magazine stands as a reflection of our students' creativity, technical competence, and ability to communicate ideas with clarity and confidence.

During the year, the department actively promoted outcome-based and learner-focused education, supported by experiential learning through projects, technical events, and collaborative initiatives. The contributions featured in this magazine highlight the curiosity, innovation, and commitment of our students as they engage with emerging technologies and translate classroom learning into practical applications.

I sincerely acknowledge the dedicated efforts of the student editorial team and faculty members whose cooperation and perseverance made this publication possible. I believe this magazine will serve as a source of inspiration, encouraging students to pursue excellence, innovation, and responsible contributions to the engineering profession and society at large.

Prof. Dr. Dharmaraj R. Patil
Editor
Professor
Department of Computer Engineering

Editorial Board Student Member



Ankita Madhukar Patil
Member



Dishant Satish Mahajan
Coordinator



Devendra Rajeshwar Bari
Member

R. C. Patel Institute of Technology
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Faculties Achievements


LAXMI INSTITUTE OF TECHNOLOGY

CERTIFICATE

OF PARTICIPATION

awarded to

Makarand Mali

Research Scholar, R C Patel Institute of Technology, Shirpur

for presenting the research article titled

Issues and Challenges Faced by Mobile Application Users and Developers

in

2nd International Conference on Emerging Trends In Engineering And Technology (ICETET22).

Patron Dr. Basavaraj Patil

Co-Patron Prof. Ameet Patel

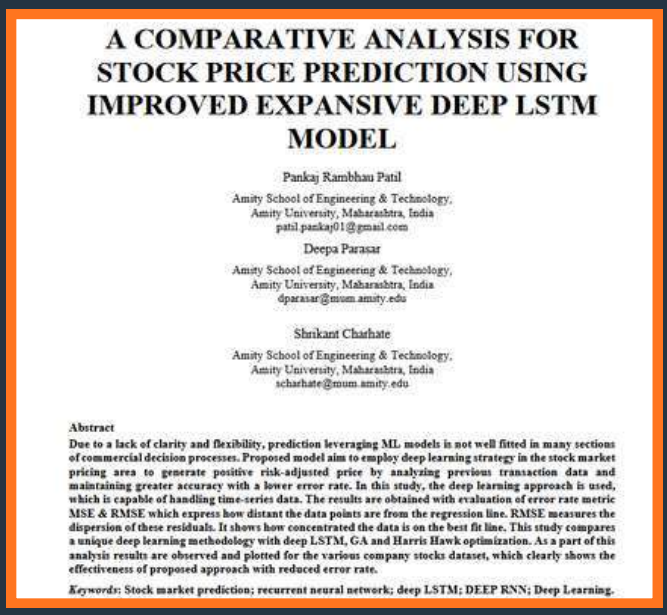
2nd International Conference

Mr. Makarand Mali

Research Scholar, R. C. Patel Institute of Technology, Shirpur, successfully presented a research paper titled **"Issues and Challenges Faced by Mobile Application Users and Developers"** at the **2nd International Conference** on Emerging Trends in Engineering and Technology (**ICETET-22**) and received a Certificate of Participation.

Mr. Pankaj Rambhau Patil

Along with **co-authors Ms. Deepa Parasar** and **Mr. Shrikant Charhate**, has published a **research paper** titled **"A Comparative Analysis for Stock Price Prediction Using Improved Expansive Deep LSTM Model."** The study employs deep learning techniques for stock market prediction, demonstrating improved accuracy with reduced error rates.


A COMPARATIVE ANALYSIS FOR STOCK PRICE PREDICTION USING IMPROVED EXPANSIVE DEEP LSTM MODEL

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Abstract
Due to a lack of clarity and flexibility, prediction leveraging ML models is not well fitted in many sections of commercial decision processes. Proposed model aims to employ deep learning strategy in the stock market pricing area to generate positive risk-adjusted price by analyzing previous transaction data and maintaining greater accuracy with a lower error rate. In this study, the deep learning approach is used, which is capable of handling time-series data. The results are obtained with evaluation of error rate metric MSE & RMSE which express how distant the data points are from the regression line. RMSE measures the dispersion of these residuals. It shows how concentrated the data is on the best fit line. This study compares a unique deep learning methodology with deep LSTM, GA and Harris Hawk optimization. As a part of this analysis results are observed and plotted for the various company stocks dataset, which clearly shows the effectiveness of proposed approach with reduced error rate.

Keywords: Stock market prediction; recurrent neural network; deep LSTM; DEEP RNN; Deep Learning.

Research Paper


International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2022): 7.942

An Effective Unsupervised Machine Learning Technique and Research Challenges

Vishal S. Thakare[1], Jayshri S. Sonawane[2]

[1]R. C. Patel Institute of Technology, Shirpur

[2]R. C. Patel Institute of Technology, Shirpur

Abstract: *Clustering is to categorize data items with similar structures or patterns into the same group for reducing data complexity and facilitating interpretation. It is common technique for statistical data, machine learning and computer science analysis. Clustering is a kind of unsupervised learning. In this paper the various clustering techniques are discussed. Clustering techniques grouping the content of a website or product, segmenting customers or users, creating image segments to be used in image analysis application. Clustering is the technique segment the data to assign each training set. Clustering is the classification of objects into different group, or more precisely, the partitioning of a data set into subsets (cluster), so that the data in each subset(ideally) share some common trait- often according to some defined distance measure.*

Keywords: Cluster, K-means, Mean-Shift Clustering, Euclidean Distance, Tanimoto Distance, Agglomerative Hierarchical Clustering

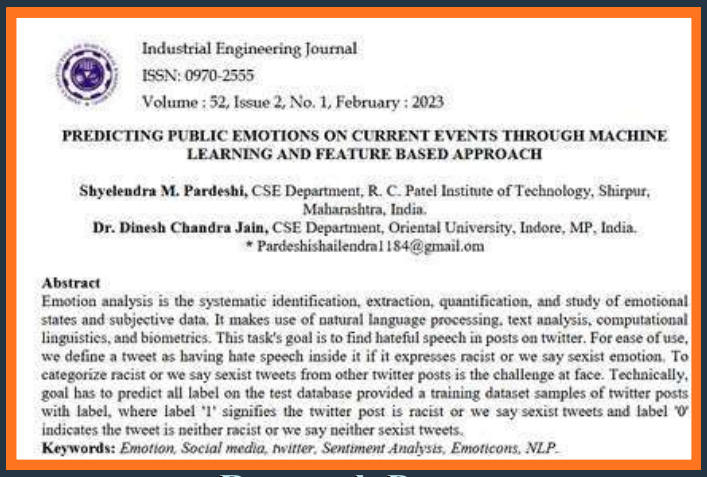
Research Paper

Mr. Vishal S. Thakare

Along with **Ms. Jayshri S. Sonawane** have published a **research paper** titled **"An Effective Unsupervised Machine Learning Technique and Research Challenges"** in the International Journal of Science

R. C. Patel Institute of Technology
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Faculties Achievements



Industrial Engineering Journal
ISSN: 0970-2555
Volume : 52, Issue 2, No. 1, February : 2023

PREDICTING PUBLIC EMOTIONS ON CURRENT EVENTS THROUGH MACHINE LEARNING AND FEATURE BASED APPROACH

Shyelendra M. Pardeshi, CSE Department, R. C. Patel Institute of Technology, Shirpur, Maharashtra, India.
Dr. Dinesh Chandra Jain, CSE Department, Oriental University, Indore, MP, India.
* Pardeshishailendra1184@gmail.om

Abstract
Emotion analysis is the systematic identification, extraction, quantification, and study of emotional states and subjective data. It makes use of natural language processing, text analysis, computational linguistics, and biometrics. This task's goal is to find hateful speech in posts on twitter. For ease of use, we define a tweet as having hate speech inside it if it expresses racist or we say sexist emotion. To categorize racist or we say sexist tweets from other twitter posts is the challenge at face. Technically, goal has to predict all label on the test database provided a training dataset samples of twitter posts with label, where label '1' signifies the twitter post is racist or we say sexist tweets and label '0' indicates the tweet is neither racist or we say neither sexist tweets.
Keywords: *Emotion, Social media, twitter, Sentiment Analysis, Emoticons, NLP.*

Research Paper

Mr Shailendra M. Pardeshi

Along with **Dr. Dinesh Chandra Jain** have published a **research paper** titled **"Predicting Public Emotions on Current Events through Machine Learning"** in the **Industrial Engineering Journal, Volume 52,** Issue **2, February 2023.** The work focuses on emotion and sentiment analysis of social media data using **machine learning and NLP techniques**



R. C. Patel Institute of Technology
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Department Activities



KAVACH–2023 Internal Hackathon

The Department of **Computer Engineering** at **R. C. Patel Institute of Technology, Shirpur,** successfully organized the **Cyber Security KAVACH–2023 Internal Hackathon** on **11 April 2023**. The event was conducted as a preparatory stage for the **National Level Cyber Security KAVACH Hackathon–2023,** with the objective of encouraging **innovative problem-solving** and **cybersecurity awareness** among students.

The internal hackathon began with the **Idea Presentation Round**, where participating teams presented their proposed solutions. Based on the evaluation of ideas, innovation, and feasibility, the judging panel **shortlisted the top 10 teams to represent the institute** at the national level competition.

The event was formally **inaugurated by Prof. Dr. Jayantrao B. Patil,** Director of the institute, in the presence of faculty members, judges, volunteers, and student participants.

A total of **20 teams comprising 120 students** participated in the hackathon, including **78 male** and **42 female students**, reflecting active and inclusive participation. The internal hackathon was **coordinated under** the guidance of **Mr. Ashish Patil**, Faculty In-Charge, with **Mr. Ashish K. Patil** serving as the Single Point of Contact (SPOC) for the event.

The **evaluation** process was carried out by a **panel** of experienced faculty members, including **Prof. Dr. Nitin N. Patil, Prof. Dr. Dharmaraj R. Patil, and Mr. Sudarshan S. Sonawane,** who assessed the teams based on technical depth, innovation, and problem relevance.

The successful conduct of the internal hackathon provided students with a valuable platform to enhance their technical skills, teamwork, and readiness for national-level cybersecurity challenges.





R. C. Patel Institute of Technology
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Students Achievements



Prepare Data for Exploration

Ms. Harshpuja Badgujar

A B.Tech Final Year R. C. Patel Institute of Technology, Shirpur, has **completed the Prepare Data for Exploration online Course** offered **by Google** through Coursera. This certification reflects her initiative to build a strong foundation in Prepare Data for Exploration. aligning with current industry demand



Converges 23

Ms. Gargi Chavan

A B.Tech Second Year R.C.Patel Institute of Technology, Shirpur, has participated in **Dectective Dilemma of "Converges 23" A National Level Technical Symposium** Organized by of R. C. Patel Institute of Technology, Shirpur on **25 February 2023**



7-Days bootcamp with Dev Town

Ms. Harshada More

A student of B.Tech Final Year R. C. Patel Institute of Technology, Shirpur for **Completing 7-Days bootcamp with Dev Town on C++ and Data Structure and Algorithm.**

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Students Achievements



Converges 23

Ms. Snehal Girase

Student of B.Tech Third Year, R.C. Patel Institute of Technology, Shirpur, has participated in **Detective Dilemma of "Converges 23"** A National Level Technical Symposium Organized by of R.C.Patel Institute of Technology, Shirpur **on 25 February 2023.**



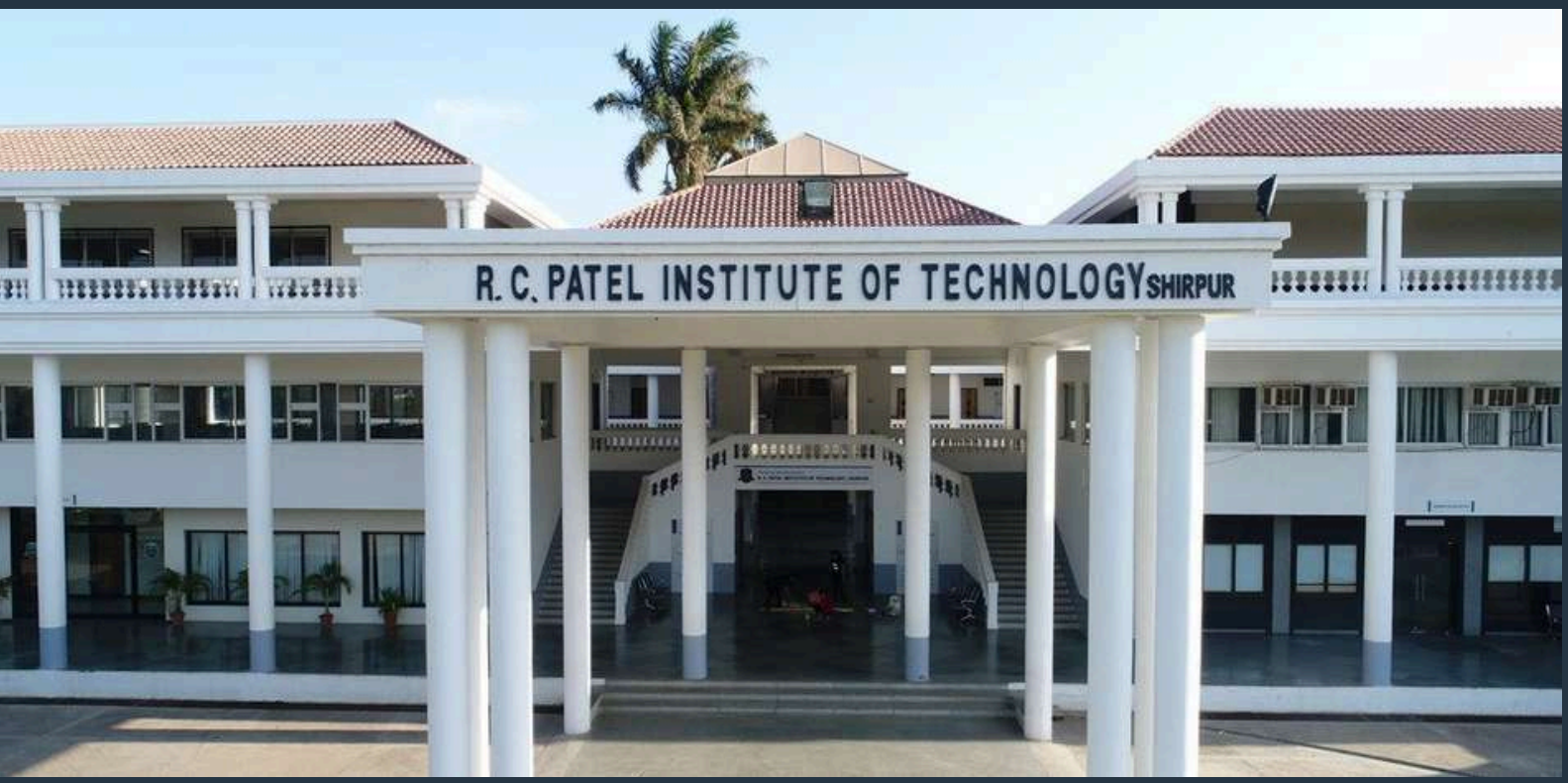
Internal Smart India Hackathon 2023

Mr. Vedant Borane

B.Tech Third Year, R.C. Patel Institute of Technology, Shirpur, **team Cyber Sages** actively participated in the prestigious **Internal Smart India Hackathon 2023**, demonstrating exemplary problem-solving skills, innovation, and dedication to addressing critical challenges.



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