

# **Gujarat Technological University Graduate School of Engineering and Technology**

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Academic Block 5, GTU-Chandkheda Campus, Nr.Vishwakarma Government Engineering College, Nr.Visat Three Roads, Visat – Gandhinagar Highway, Chandkheda, Ahmedabad – 382424 – Gujarat.



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### **GTU - GSET ACHIEVEMENT**

The Postgraduate program in Computer Engineering with a specialization in Cyber Security has achieved a significant milestone by securing accreditation from the prestigious National Board of Accreditation (NBA). This accreditation stands as a testament to the program's unwavering commitment to academic excellence and adherence to rigorous quality standards. The recognition is received for the next three academic years, from 2023-2024 to 2025-2026, highlighting the sustained dedication to maintaining high educational benchmarks. This achievement not only enhances the program's credibility but also solidifies its position as a leader in the field of Cyber Security education. The accreditation serves as a mark of distinction, assuring students, faculty, and stakeholders of the program's commitment to providing a cutting-edge and industry-relevant curriculum, fostering a dynamic learning environment, and producing graduates of the highest caliber in Computer Engineering and Cyber Security.

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# **GTU - GSET FACULTY ACTIVITIES**

#### FDP/STTP/Training program/workshop organized

The six-day AICTE Sponsored Faculty Development Program centered on "Advances in Earthquake Engineering and Structural Resilience." Renowned experts from IITs, NITs, and esteemed institutes, along with industry professionals, delved into key areas of earthquake engineering. Case studies from Surat, Kolkata, and other cities were analyzed. The sessions encompassed Indian Standards on earthquake measures for reinforced concrete and industrial steel structures. Inaugurated in the presence of Hon'ble VC-GTU, Dr. Vatsal Patel, and distinguished guests, including Dr. Dhiman Basu from IIT GN, the ATAL FDP concluded with appreciation from coordinators Dr. J. A. Amin and Prof. M. S. Seth, providing valuable insights for participants.







### Award/Appreciation received by faculty members

#### Prof. Deepak Upadhyay, Assistant Professor

• Received letter of Appreciation for detection and investigation of a case of paramount national security importance at Additional Director General of Police, Anti-Terrorist Squad, Gujarat State, Ahmedabad dated 6<sup>th</sup> November 2023.

Prof. P. S. Mann, Associate Professor

• Received Certificate of Appreciation for contribution to The Inventor Challenge 2023 jointly organized by AICTE, New Delhi in association with Arm Education and ST Microelectronics, from July-Oct 2023.



#### Faculty members as Resource Persons

#### Prof. Deepak Upadhyay, Assistant professor

- Delivered an expert session on "**Cyber security awareness**" for Air Force Officers at Lekawada on 02.11.23.
- Delivered an expert session on **"Cyber Awareness"** for Union Bank of India Employees on 11.12.23.
- Delivered an expert session on **"Open-Source Intelligence"** during Two-week ITEC Course on Cyber Crime Investigation Training, Iteration-II for Nepal Police Officers at Rastriya Raksha University on 12.12.23.





#### Prof. P. S. Mann, Associate Professor

- Delivered two expert sessions on "Design Patterns" and "Recent Trends in Object-oriented Software Development", during Object Oriented System Design Course by NITTTR Chennai on 16<sup>th</sup> and 17<sup>th</sup> November 2023.
- Delivered an expert session on "Cyber Security & Fraud Management and Best Practices for Fraud Management" during a Two-week ITEC Course on Financial Fraud Investigation Training for Nepal Police
   Officere et Dechtring Deleche University (DDD) Conduined



Officers at Rashtriya Raksha University (RRU), Gandhinagar on 12<sup>th</sup> October 2023.

- Invited as Expert to review INTI International University, Malaysia Seed Funding research proposal on 9<sup>th</sup> November 2023.
- Attended an International level Workshop on **"India-Australia Partnership Framework** on AI, Quantum and Critical Technologies enabling Digital Economy" at GNLU, Gandhinagar.

#### Prof. J. A. Amin, Professor

 Delivered an expert session on "Influences of Seismic, Structural and Geotechnical aspects on Infrastructure Projects" in a six Days AICTE Training and Learning (ATAL) Academy Sponsored Faculty Development Program (FDP) organized by Gujarat Power Engineering and Research Institute (GPERI), GTU on 13<sup>th</sup> December 2023.

Prof. S. D. Panchal, Professor, Prof. P. S. Mann, Associate Professor, Prof. Mahesh Panchal & Prof. Komal Prajapati, Assistant Professor.

• Coordinated a sixth expert session on **"Blockchain for FinTech"** under the lecture series in the domain of Blockchain Technology under Centre of Excellence for Blockchain Technology by the expert **Dr. Debasis Das**, Associate Professor, IIT Jodhpur on 21<sup>st</sup> October 2023.





### Prof. Komal D. Prajapati, Assistant Professor

• Completed and certified in **"Training course on iOS Forensics with BelkaSoft"** on 11<sup>th</sup> October 2023.





### Prof. Soniya Jain, Assistant Professor



Coordinated an expert session on **"Understanding Statistical Hypothesis Testing: From Fundamentals to Useful Applications"** by the expert Dr. Sachin Sharma from Indrashil University on 18th December 2023.





# **GTU-GSET STUDENT ACTIVITIES**

Fostering and uncovering diverse talents and skills among students, the Institute has instituted seven clubs (SAPTAK) spanning technical and non-technical realms. Each club operates with distinct objectives and guidelines, managed by students who orchestrate activities throughout the semester. Recent quarterly endeavors include:

#### **Research and Innovation Club**

#### **Effective Research Writing Using LaTeX**

The Research and Innovation club has organized an expert talk on "Effective Research Writing Using LaTeX" on 18-12-23 (Monday) between 01:00 PM to 03:00 PM, through the Google Meet platform. The lecture was delivered by Dr. Satvir Singh, Professor, IKG Punjab Technical University, Kapurthala, Punjab, INDIA. Dr. Satvir elaborated on the significance of good research writing with the help of open-source tools like LaTeX.



#### **Cyber Security Club**

#### Cyber Awareness Program



The Cyber Awareness Program was arranged at Lilapur Village, Ahmedabad with the objectives to educate and inform individuals about the importance of cybersecurity to promote responsible and secure online behaviors and to provide participants with the knowledge, skills, and safety tips to protect their data and personal information from cyber threats and other online risks in daily life. More than 20 participants attended the session. At the end of the program, participants were able to learn about Informed about cyber security risks, common threats, and best practices for staying safe online, increased confidence in making online transactions, such as banking and shopping, without falling victim to scams, Enhanced ability to recognize and avoid phishing emails, calls, or text messages.



#### **Student Placement**

**Ms. Bhoomi Vekariya, P.G. (Internet of Things),** batch - 2021- 23, has been selected as an Associate Engineer at e-Infochips Private Limited, Ahmedabad.



#### **Student Participation**

Students of GTU-GSET have contributed in various technical and non-technical activities, attended number of events and completed various technical course during last three months. Some of the distinctions include:

Sr. No.	Student Name	Branch	Activity Detail
1	Bhalala Ronakbhai Bharatbhai	Semester-3, PG (Cyber Security)- Batch 2022-24	• Completed "Google Cloud Generative AI" course Accredited by NASSCOM, Approved by the government of India.
2	Bheda sejal	Semester-1, PG (AI&DS)- Batch 2023-25	<ul> <li>Completed course on</li> <li>Data Science Foundation by Great Learning platform</li> <li>Tableau For Beginners in Hindi by Great Learning platform</li> </ul>
3	Patel Jinal Vinaykant	Semester-1, PG (AI&DS)- Batch 2023-25	<ul> <li>Completed course on</li> <li>Certification in Tableau For beginners</li> <li>Data Science Foundation by Great Learning platform</li> </ul>
4	Karnav Modi	Semester-1, PG (AI&DS)- Batch 2023-25	• Completed course on Certificate of Coursera on "Fundamentals of Visualization with Tableau"

# **RESEARCH CONTRIBUTION**

Research serves as the bridge connecting academia with industry, fortifying the postgraduate institute in tangible ways. Faculty and students at GTU-GSET have actively contributed to this link by publishing and presenting research papers/articles in esteemed journals and conferences. Moreover, faculty members have undertaken the responsibility of reviewing research papers/articles for diverse journals and conferences, exemplifying the institute's commitment to scholarly engagement and its pivotal role in advancing knowledge and collaboration between academia and industry.

#### Prof. (Dr.) P. S. Mann, Associate Professor, Prof. S. D. Panchal, Professor

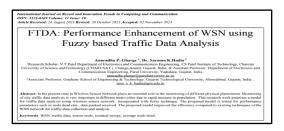
 Published a research paper titled "A hybrid deep convolutional neural network model for improved diagnosis of pneumonia" in Neural Computing and Applications, Springer (SCIE) along with Satvir Singh, Guramritpal Singh Saggu, and Keshav Gupta on 16<sup>th</sup> November 2023.

ORIGINAL ARTICL	E	
A hybrid de diagnosis of		al network model for improved
Palvinder Singh N Keshav Gupta <sup>3</sup>	ann <sup>1</sup> 📀 • Shailesh D. Panchal <sup>1</sup> •	Satvir Singh <sup>2</sup> · Guramritpal Singh Saggu <sup>3</sup> ·
	/Accepted: 17 October 2023 exclusive licence to Springer-Verlag Lond	on Ltd., part of Springer Nature 2023
all over the world. chest plain X-ray improved diagnosis model, image prepr better sampling an hybrid deep convol	Moreover, sometimes it became qui images. Therefore, we propose a c of pneumonia, to simplify the d occessing is performed using Stude: d segregation between the healthy tional neural network model is bu	lungs and is one of the prime causes of deaths under the age of fi its difficult to detect and diagnose pneumonia by just looking at hybrid deep convolutional neural networks model (IURCNN) tetection for medical practitioners and specialists. In this propo- deated practice of the properties of the prime properties of the advectory of hangs, so improve the predictions. Further works to advectory better results of discussi. The properties of the properties of the prime prime properties of the properties of the properties of the prime prime properties of the prime properties of the prim prime prime prime prime prime prime prime prim prime prim

#### Prof. (Dr.) P. S. Mann, Associate Professor

- Reviewed a research paper titled "A Novel Self-Adaptive Multi-Strategy Artificial Bee Colony Algorithm for Coverage Optimization in Wireless Sensor Networks", for Ad Hoc Networks, Elsevier. (SCIE) during December 2023.
- Presented a paper with research scholar, Ronak Bhalala (Semester-3, PG (CS) Batch 2022-24) titled "Prior Stage Kidney disease prediction with AI and Supervised Machine Leaning Technique" at the 3rd International Conference on Women in Science and Technology: Creating Sustainable Career BVM Anand, Gujarat during 28th to 30th December, 2023.

Prof. S. K. Hadia, Associate Professor



Published research • а paper on "Improving **Network Efficiency in Video Traffic** Analysis using Wireless Sensor Network". International Journal on Recent and Innovation Trends in Computing and Communication, with Anuradha P. Gharge on 10<sup>th</sup> October 2023.

• Published a research paper on **"FTDA: Performance Enhancement of WSN using Fuzzy based Traffic Data Analysis",** International Journal on Recent and Innovation Trends in Computing and Communication, Auricle Global Society of Education and Research, with Anuradha P. Gharge on 2nd November 2023.

International Journal of INTELLIGENT SYSTEMS AND APPLICATIONS IN							
IJISAE ISSN:2147-6799	ENGINEERING www.ijisae.org	Original Research Paper					
Improving Network Efficiency in Video Traffic Analysis using Wireless Sensor Network							
Anuradha P. Gharge <sup>1</sup> , Dr. Sarman K. Hadia <sup>2</sup>							
Submitted: 26/05/2023 Revised: 06/0	07/2023 Accepted: 24/07/2023						
Abstract: Wireless Sensor Network plays an monitoring, enemy detection, etc. Due to incre traffic and WSN plays an essential role in the f	ased vehicle demands, there is a need for vi	ideo traffic monitoring for the monitoring of					



- Served as a TPC member in the 4th IEEE International Multidisciplinary Conference on Engineering Technology IMCET 2023 during 12<sup>th</sup> 14<sup>th</sup> December 2023.
- Served as a TPC member in the International Conference on Microelectronics IEEE ICM 2023 during 17<sup>th</sup> -20<sup>th</sup> December 2023.
- Guided one PhD student named Kaushal Vala from the Charotar University of Science and Technology who is now eligible for the degree of Doctor of Philosophy (Ph.D.) during December 2023.

#### **Prof. J. A. Amin, Professor**

- Reviewed a research paper in KSCE Journal of Civil Engineering titled "Study on the Windinduced Interference Effect of a Large-span Roof Structure Building Group KSCE Journal of Civil Engineering", during November 2023.
- Carried out Consultancy work on "Proof checking and vetting of the structural design of Structural framing supporting system for water screening arrangement" during October 2023.

#### Ms. Dhwani Rajkumar Hakani, ADF (PhD Research Fellow)

• Reviewed a research paper titled on "Analysis of the Impacts of Flooding-based DDoS Attacks on SDN-enabled Cloud in ANTIC2023, a springer nature journal", during November 2023

#### Prof. G. D. Makwana, Associate Professor

- Published Indian Patent on **"AN INNOVATIVE ASTHMA ATTACK PREDICTION AND MONITORING DEVICE**" on 20th October 2023 with Mr. Saif Saad Fakhrulddin, Dr. Vaibhav D. Bhatt, Dr. Sadik Kamel Gharghan and Dr. Kossay Kamalaldeen Al-Ahmady.
- Presented a research paper titled "**The Role of Data Analytics in Optimizing Crowd Surveillance: A Review**" in International Journal of Science and Research Development at LDRP National Conference-2023 on 23rd December 2023 with PG Scholar (IoT) Ms. Pooja Sharma and published the paper in International Journal for Scientific Research and Development(IJSRD) ISSN- 2321 0613.
- Presented a research paper with a PG scholar Anand Shrivastava, PG (AI&DS) titled **"Multiple approaches of Named Entity Recognition**" at LDRP National Conference-2023 on 23rd December 2023 and published the paper in the International Journal for Scientific Research and Development(IJSRD) ISSN- 2321 0613.
- Guided one Ph.D. scholar Mr. Patel Devendra Kumar and awarded the degree of Doctor of Philosophy (Ph.D.) from Sankalchand Patel University, Visnagar in October 2023.
- Served as a TPC member and reviewed six research papers at the **International Conference on Emerging Technologies for Sustainability and Intelligent Systems (ICETSIS) 202**4 organized by Applied Science University, Bahrain, Kingdom of Bahrain in December 2023.



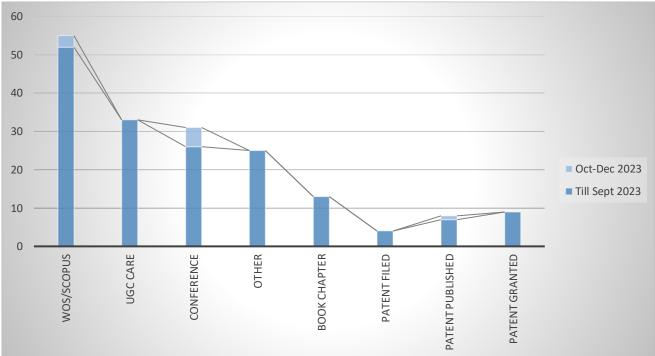
#### Prof. Rutika Ghariya, Assistant Professor

• Presented a paper titled **"Enhancing Marine Conservation: YOLOv8-based Underwater Waste Detection System"** at the 3rd International Conference on Innovative Mechanisms for Industry Applications (ICIMIA 2023) at Dayanand Sagar College of Engineering, Bengaluru.

3rd International Conference on Innovatio DVD Part Number: CFP23K58-DVD; IS	ee Mechanisms for Industry Applications (ICIMIA 2023) BN: 979-8-3503-43(2-5	)				
Enhancing Marine Conservation: YOLOv8-based Underwater Waste Detection System						
Milind Stach * Department of Computer Engineering Dermog Pattel Institute of Advance Technology & Research (DDFSTAR), Focarly of Fechnology & Engineering (FTR), Charnon University of Science & Technology (CHARUSAT), Changa 388421, Iadia millindahhoropatteriligamuil.com	Deverpna Garg Department of Computer Engineering Devening Paul Institute of Aburnee Technology & Research (DEINSTAR), (FTE), Charotae Ulawership of Science & Technology (CHARGSTAT), Changa 3384221, India dweept 19995/gmall.com	Rutika Ghariya Assistant Professor Graduate School of Engineering & Technology (GSET), Gajauri Technological University Ammedabad, Gujanzt, India ap_mikkaigina.edu.in				
Vaishnavi Solariki Assistant Professor Department of Computer Engineering Gigarat Power Engineering & Research Iostime(GPERD, A Constitute College of Gayarat Technological University Mehasana, Cajarat, India Sulariki/subinavi/283/igmail.com	Roopal Rajput Assistant Professor Digarana of Computer Engineering Gigaraa Power Engineering & Research Institute(CPER), A Constitute College of Gigarat Technological University Mehana, Gujarat, India rajpattopal U.25(gmail.com	Mayur Chanhan Assistant Professor Department of Computer Engineering Gajarat Power Engineering & Research Institute (FDRR), A Constitute College of Onjarat Technological University Mehanan, Grajarat, Italia emayar 1935jiganali.com				

#### **Research Progress**

# Cumulative Publication Details:



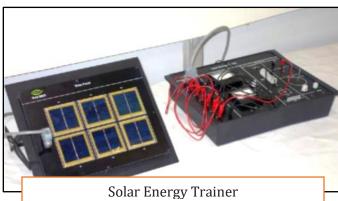
	Wos/ Scopus	UGC CARE	Conference	Other	Book Chapter	Patent Filed	Patent Published	Patent Granted
Till Sept 2023	52	33	26	25	13	4	7	9
Oct-Dec 2023	3	0	5	0	0	0	1	0
Total	55	33	31	25	13	4	8	9

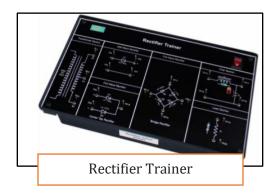
#### Equipment





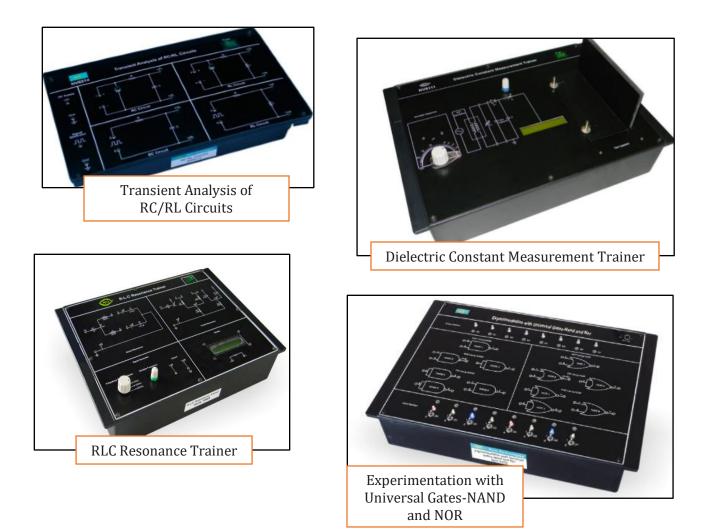


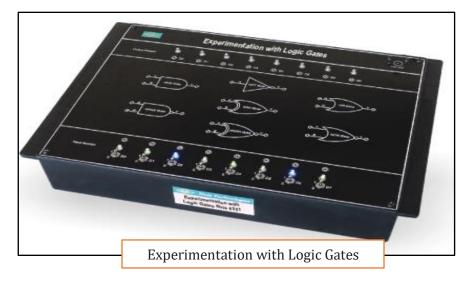














### LIBRARY NEW ARRIVALS





### **CREATIVE CORNER**

#### **Student/Professor's Blog**

Prof. (Dr.) S. D. Panchal, Professor & Director

сив-2028, นราธิดา นายิดา... 01/09/2028 aêr นร์เธิกา มายังา .... นร์เธ อน์ หายังการ หาวายย เช เห ย์ อมด์ שותו הממצי-2028 הו נצמאוא עציצ, מצמון ההאות-นต์, เรีย- ณานี้ ราปีๆ เหตุ่ ยีมอยู่ มีคุศาม หายังเ... शिवमस्त संपर्भगत: स्पर्धान सर्व क्लाननु भ्रेय स्पने भ्रेय אשנו ה אוציאו... ה שונהו ביויאו גרטוניו אוצ אצווחוצי ה בוכבו - שאצוניב עוֹ אוציחו נוח סוט ט. באאט אמוצ ט, ה ag 2021 ยิ... ริติธรรสา นเสา มีริ นช มีร. สาราพา - abi GEA גנצו ום. 'צוונ' הו איזאו משוו פגוונות הר אש איני שי איק נא ע ינוצי חו צואאו אוו-אנצו שוואא ש עלו בי אאוויין אין אין אין אוויין ע समाळने विकास मतीडात्मड तवडडायी न्यारेल हरी जुदालकी, 36-כווב שלעשונובן, משוראתפורטובל שעה ביבי שעונטונטינ บมเพละเลาอ่า อาลาส์ราเศร สุดรราชาาลา อุสสาราย นุวเก - มองเล ระลา 2007 8. 211- 1 คิมิษ ยาเกอะ มอโน มา อนารณ์ ริง ยิ... ศลุณษ์ค ลอิศ นวิธี น่าย นายเก นามนะ การุศา... สิมา Aurizar (Freedom), 21-227 (Field), 21627- (Friend), 21929-(אונאתו (Feeling) שות אתנו (אונהו (Force) .... געותאתו ה סא נהושוצה עורו בונחש הו נווצגוהו בזגוה בארצא ז באוראא בין בוגוע, הלאו איזועטן (אטאווזי הא העמוע. אי הע איטו पछी यत संवर्धन्वीतना नही तो जिन्दें छे. सत्रको हे द्विसेत्र બુરસ્પાત છો ૫(1 😋 લાગ(ત) શત્રે ભિખાશ છો. આને સૌથી ઉપર 2100 (21411. 5 241 22157 2005 กาวรุย) 2167 เกาลิ อ. 200 Cartingon sur viBrain 9 "גר ה הוא שויצע שלץ שווצוצי אאחוק דוק, (32 2152101 21) วา, नीय उडरडामां जाय... 248 अवेला उहर आतर, วาซ กูลิ อนเราลา สเวเนต...." ab- 2028 - aid usis शिवम्मम् दीवजगत: 018-11 2144....



#### Prof. Komal D. Prajapati, Assistant Professor

### <u>મા - વાત્સલ્યનો ભંડાર</u>

જીવનની શરુઆત તું, મારો હર-હંમેશનો સાથ તું..

મારી ઓળખાણ જ તું , તારું પ્રતિબિંબ જ હું..

દુનિયાનું અનોખું વ્યક્તિત્વ જ તું , તારે મન જાણે સર્વસ્વ જ હું..

મારી આંખોનું તેજ જ તું, મારી પ્રત્યેક ક્ષણનો આધાર જ તું..

સમય આવ્યે હિમાલય જ તું, મારી સઘળી સમસ્યાઓમાં સંગાથ જ તું..

> નારીશક્તિનું ઉદાહરણ તું, અખૂટ વ્હાલનો સાગર તું..

તારે મન બાળક જ હું, મારા જીવનમાં વૃક્ષસમી છાયા તું..

મારા જીવનનો આધાર જ તું, વાત્સલ્યનો અખૂટ ભંડાર જ તું..

https://encr.pw/VPcbK



# **GTU – GSET IN MEDIA**







### **About GTU**

#### Vision:

To be a global university for the creation and dissemination of knowledge and Innovation in Science & Technology, Humanities and Multidisciplinary domains for sustainable development and enrichment of human life.

#### Mission:

- To develop centres of academic excellence at university premises and at affiliated colleges in domains of science, engineering, technology, management, and environment for imparting comprehensive education, training, and research infrastructure as per the nation's requirements.
- To build resources, facilities, proficiencies and other related infrastructure of global standard for the development of knowledge, skills, and competencies in the various educational domains.
- To develop research-oriented pedagogy for flourishing ideas and to nurture innovators, entrepreneurs and professionals of tomorrow
- To build and enhance collaborations with other academic, research, industry, and government organizations as well as NGOs across the globe so that education, training and research at university and its affiliated colleges become aligned with national and global level requirements.
- To encourage multidisciplinary research and develop flexible learning ecosystem,

#### **About GTU - GSET**

#### Vision:

• To create an ecosystem in education and research that provides socially responsible, globally acceptable technocrats, innovators and entrepreneurs

#### Mission:

- To develop state-of-art research facilities with well-equipped academic infrastructure
- To establish strong collaborations with research organizations, Institute of national importance and Industries that promote research and consultancies
- To encourage innovative practices to produce innovators and entrepreneurs
- To leverage International linkages of the University to establish strong international out reach



#### Why "KANASH"?

"Expressing a gratitude to the all stakeholders of GTU-GSET"

- **K: Knowledge**
- A: Achievement
- **N**: Nurturing
- **A : Acknowledgement**
- S: Sustainability
- **H** : Happiness

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