



AHMEDABAD
INSTITUTE OF TECHNOLOGY

PIXEL

THE WORLD OF DETAILS IN EVERY DOT

HOW AI IS
CHANGING
THE WORLD !

AI.
ARTIFICIAL
INTELLIGENCE

JAN-JUNE 2024



DEPARTMENT OF INFORMATION TECHNOLOGY



गुरुर्ब्रह्मा गुरुर्विष्णुर्गुरुर्देवो महेश्वरः।
गुरुरेव परं ब्रह्म तस्मै श्रीगुरवे नमः॥

- The Guru is Brahma (the Creator)
- The Guru is Vishnu (the Preserver)
- The Guru is Maheshwara (the Destroyer, i.e., Shiva)
- The Guru is verily the Supreme Brahman itself
- Salutations to that Guru.

This sholaka beautifully encapsulates the profound reverence and gratitude towards a teacher, acknowledging their role not just as an educator but as the embodiment of divine knowledge and wisdom. It signifies the teacher as the ultimate guide, leading the student from darkness to light, from ignorance to knowledge.



SHRI SHAMJIBHAI PATEL

CHAIRMAN , AIT



Dear Students, Faculty, and Readers,

It gives me immense pleasure to address you through this edition of our college magazine PIXEL 2024, a testament to the vibrancy and creativity that defines the Ahmedabad Institute of Technology. Since our inception in 2004, we have been committed to nurturing talent, fostering innovation, and building a community where knowledge is not just shared but celebrated.

Over the years, our institute has grown from strength to strength, achieving milestones that reflect our dedication to academic excellence and holistic development. Our journey has been marked by the accomplishments of our students, the innovative strides of our faculty, and the unwavering support of our stakeholders.

I extend my heartfelt congratulations to the editorial team and everyone involved in bringing this publication to life. Your hard work and creativity are truly commendable.

To our readers, I hope this magazine inspires you, sparks new ideas, and brings a sense of pride in being part of the AIT family.

Wishing you all the very best in your endeavors.

Warm regards,

Chairman

Ahmedabad Institute of Technology



DR. SARADA DEVI MANDALAPU

Principal, AIT

Dear Students, Faculty, and Readers,

Embracing innovation necessitates individuals who drive transformative change within their workplace. Success in today's global landscape relies on navigating challenges in information technology. The Department of Information Technology at Ahmedabad Institute of Technology exemplifies these principles through ongoing efforts.

Our educational approach cultivates self-assured individuals who embrace challenges. Comprehensive campus facilities reflect our dedication to nurturing well-rounded students. Our focus on holistic development prepares students for diverse professional environments.

Proficiency in computing technology is increasingly vital. As technology evolves, staying competitive is crucial. I await PIXEL 2024, confident it will inspire growth.

Best wishes to the PIXEL team for fostering collaboration and innovation.

Warm Regards ,
Principal



DR. ASHISH CHAURASIA

Professor & Head

Welcome to explore the achievements and activities of the Department of Information Technology through this semester's publication of PIXEL 2024. We take pride in our robust academic programs, blending theoretical and practical knowledge to meet industry demands.

We are dedicated to our students, offering short-term courses and pre-placement training that foster critical and analytical thinking, equipping them with the necessary skills to excel in the industry. We are confident that many students from our department will leave a lasting impact nationally and internationally in the field of Information Technology, making us proud.

Our department comprises hardworking students and a young, dynamic faculty with expertise across various disciplines in computer science. Our healthy work culture fosters an environment conducive to growth and innovation. Together, these elements form the foundation of the Department of Information Technology at our institution.

Warm Regards
Head of Department
Information Technology



AHMEDABAD

INSTITUTE OF TECHNOLOGY

VISION

To become a premier technological institution that fosters excellence in education and research and serve industry and society at large.

MISSION

- To develop a culture of excellence in teaching and learning with needed performance and accountability from all activities in the institute.
- To provide an environment in which new ideas, research and scholarship flourish thus producing leaders, researchers and entrepreneurs.
- To promote co- and extra-curricular activities for over-all personality development of the students resulting into responsible citizenship with ethical values.



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04

Department of Information Technology

VISION

To impart quality education and research in Information Technology to produce a competent, committed and goal oriented workforce to fulfill the needs of the local and global IT Industry

MISSION

- The Department's Mission is to advance knowledge in the field of Information Technology and Allied Science by providing our students with the highest quality educational experience towards
- M1: Producing quality workforce with cutting edge technology.
- M2: Engaging in innovative teaching learning, research and community service.
- M3: Inculcating sense of ethical attitude, social responsibility and developing leadership quality required for a responsible IT professional.

Department at a glance

The Department of Information Technology was established in 2008 with the mission of imparting a robust technical foundation to its students. Offering a comprehensive four-year B.Tech. program, the department aims to instill both theoretical knowledge and practical skills among its students, thereby enhancing their overall expertise.

With a vision to transcend linguistic and cultural barriers, the department focuses on implementing information systems through outcome-based education. It boasts well-equipped laboratories and ensures internet connectivity across various departments through servers, radio links, and switches.

The department prides itself on its distinguished faculty members, who hail from esteemed institutions and possess a rich educational background. Committed to excellence, these faculty members actively engage in research endeavors, consistently publishing papers in renowned journals such as SCI, Scopus, and others.





ARTIFICIAL INTELLIGENCE

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON THE WORLD



Imagine a world where machines can learn and adapt like humans, tackling complex problems and even generating creative ideas. That's the realm of Artificial Intelligence (AI), a rapidly developing field that's transforming our world. But AI isn't just about fancy gadgets. We'll explore how AI can be harnessed to solve some of humanity's biggest challenges, from climate change to disease eradication. The possibilities are truly endless!

Here's not just one kind of AI. Some AI programs are very narrow, like a program that only recognizes faces. Others, like chatbots you might find on a website, are a bit more complex and can hold conversations. Scientists are still working on creating a truly "general" AI that can do many things well, just like a human.

AI systems are trained on massive amounts of data, like pictures, text, or sounds. This data helps them learn and improve at specific tasks. For example, an AI system trained on millions of cat photos can learn to recognize cats in new pictures!



AI is everywhere!* You might not realize it, but AI is already a part of your life. It's used in things like:

- * Recommending movies and music you might enjoy
- * Helping doctors analyze medical scans
- * Powering voice assistants like Siri and Alexa
- * Even self-driving cars (though those are still under development!)

However, the rise of AI also raises important questions. We'll delve into the ethical considerations surrounding AI development, from potential job displacement to the need for responsible use.

POPULAR AI TOOLS FOR DAY TO DAY LIFE



ChatGPT is an AI chatbot with natural language processing (NLP) that allows you to have human-like conversations to complete various tasks. The generative AI tool can answer questions and assist you with composing emails, essays, code, and much more. It's currently open to use for free.

Character.AI definition is a chatbot service provider whose conversational AI platform allows non-technical users to create their own chatbots and converse with chatbots created by other users.



Midjourney is accessible through a [Discord](#) bot or by accessing their website. To generate images on the website, users must have generated at least 1,000 images. Users can use Midjourney through Discord either through their official Discord server, by directly messaging the bot, or by inviting the bot to a third-party server. To generate images, users use the /imagine command and type in a prompt, the bot then returns a set of four images, which users are given the option to upscale.

DALL·E, DALL·E 2, and DALL·E 3 are text-to-image models developed by OpenAI using deep learning methodologies to generate digital images from natural language descriptions known as "prompts".



Claude, developed by Anthropic AI, is both an AI chatbot and the name for the underlying Large Language Models (LLMs) that power it. Claude is trained to have natural, text-based conversations, and it excels in tasks like summarization, editing, Q&A, decision-making, code-writing, and more.

STUDENT SECTION





Navigating Your Career in Information Technology: A Comprehensive Guide to Making the Right Choice

Introduction: The Expanding World of Information Technology

The Information Technology (IT) industry is one of the fastest-growing and most dynamic fields in the world today. With the rapid evolution of technology, the demand for skilled IT professionals is higher than ever. From cloud computing to artificial intelligence, IT offers a wide range of career opportunities that cater to various interests and skill sets. However, with so many options available, choosing the right career path can be daunting. This article aims to guide you through the process of selecting a career in IT that aligns with your strengths, interests, and long-term goals.

Self-Assessment: Understanding Your Interests and Strengths

Before diving into the specific career paths within IT, it's essential to conduct a thorough self-assessment. Understanding your interests, strengths, and what drives you is the first step toward making an informed career choice.

Identify Your Interests: Reflect on what aspects of technology excite you the most. Do you enjoy coding and developing software? Are you fascinated by data and analytics? Perhaps you have a passion for cybersecurity and protecting information? Pinpointing your interests will help narrow down your options.

Evaluate Your Strengths: Consider the skills you excel at. Are you a natural problem-solver with a knack for logical thinking? Do you have strong communication skills that could be valuable in IT project management? Identifying your strengths can guide you toward a role that you're not only good at but also enjoy.

Use Assessment Tools: Various tools and resources can help you gain a deeper understanding of your personality and strengths. For example, the Myers-Briggs Type Indicator (MBTI) can provide insights into your personality type, while the StrengthsFinder assessment can identify your top strengths. These tools can offer valuable guidance as you explore different IT career paths.

Exploring IT Career Paths: From Development to Cybersecurity

Once you have a clearer understanding of your interests and strengths, it's time to explore the various career paths within IT. Here are some of the most popular and in-demand roles:

Software Development: If you enjoy problem-solving and have a passion for coding, a career in software development might be for you. Developers create applications, systems, and software solutions that drive businesses and improve user experiences. You can specialize in areas like web development, mobile app development, or software engineering.

Data Science and Analytics: Data is the new oil, and companies are increasingly relying on data-driven insights to make informed decisions. If you have a strong analytical mind and enjoy working with numbers, a career in data science or analytics could be a great fit. Data scientists analyze large datasets to uncover trends, while data analysts focus on interpreting data to help organizations make strategic decisions.

Cybersecurity: With the rise of cyber threats, cybersecurity has become a critical area in IT. If you're passionate about protecting information and have a strong attention to detail, a career in cybersecurity might be for you. Cybersecurity professionals work to safeguard networks, systems, and data from attacks, ensuring the integrity and confidentiality of information.

Cloud Computing: As businesses migrate to the cloud, the demand for cloud computing professionals has surged. If you're interested in working with cloud technologies and have a strong understanding of IT infrastructure, a career in cloud computing could be a good fit. Roles in this field include cloud architects, cloud engineers, and cloud security specialists.

IT Project Management: If you have strong leadership and communication skills, consider a career in IT project management. Project managers oversee the planning, execution, and delivery of IT projects, ensuring they are completed on time and within budget. This role requires a combination of technical knowledge and management skills.

Education and Certifications: Building Your Credentials

Once you've identified your desired career path, it's important to acquire the necessary education and certifications to build your credentials.

Formal Education: Depending on the career path you choose, a degree in computer science, information technology, or a related field may be required. Some roles, such as software development, may also require knowledge of specific programming languages.

Certifications: In addition to formal education, obtaining industry-recognized certifications can enhance your employability. For example, certifications like CompTIA Security+ or Certified Information Systems Security Professional (CISSP) are valuable for cybersecurity roles, while certifications like AWS Certified Solutions Architect are important for cloud computing professionals.

Continuous Learning: The IT field is constantly evolving, and staying up-to-date with the latest technologies and trends is crucial. Engage in continuous learning through online courses, workshops, and industry conferences to remain competitive in the job market.

Gaining Experience: Internships and Entry-Level Positions

Gaining practical experience is essential for building a successful IT career. Internships and entry-level positions provide opportunities to apply your knowledge, develop your skills, and build a professional network.

Internships: Seek out internships while you're still in school or shortly after graduation. Internships provide hands-on experience and can often lead to full-time job offers.

Entry-Level Positions: Don't be afraid to start with an entry-level position. Many IT professionals begin their careers in roles like help desk support, junior developer, or network technician. These positions offer valuable experience and can serve as stepping stones to more advanced roles.

Networking: Building Professional Relationships

Networking is a powerful tool in career development. Building relationships with industry professionals can open doors to job opportunities, mentorship, and career growth.

Join Professional Organizations: Consider joining professional organizations related to your field of interest. These organizations often host events, workshops, and conferences that provide networking opportunities.

Engage in Online Communities: Participate in online forums, LinkedIn groups, and social media communities where IT professionals gather. Engaging in discussions and sharing knowledge can help you connect with others in the industry.

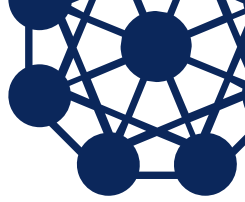
Seek Mentorship: Finding a mentor who has experience in your desired career path can provide invaluable guidance and support as you navigate your career.

Conclusion: Making the Right Choice

Choosing a career in Information Technology is a significant decision that requires careful consideration of your interests, strengths, and goals. By conducting a thorough self-assessment, exploring different career paths, acquiring the necessary education and certifications, gaining practical experience, and building a professional network, you can make an informed choice that sets you on the path to a successful and fulfilling career in IT. Remember, the IT industry is constantly evolving, and staying adaptable and committed to lifelong learning is key to thriving in this exciting field.

:Dhruvi Patel
3rd Year (IT Dept.)





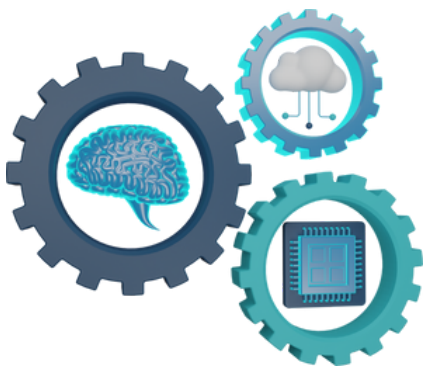
TECHNOLOGY

Technology has evolved at an unprecedented pace, fundamentally transforming every aspect of our lives. From the invention of the wheel to the advent of quantum computing, technological advancements have continuously pushed the boundaries of what is possible. Today, we stand at the forefront of a new era marked by rapid developments in fields such as artificial intelligence, biotechnology, and renewable energy. These innovations are not only enhancing our daily lives but also addressing some of the most pressing global challenges.

Artificial intelligence (AI) is a prime example of how technology is reshaping our world. AI systems are now capable of performing complex tasks, from language translation to predictive analytics, with remarkable accuracy. Machine learning algorithms, a subset of AI, enable computers to learn from data and improve their performance over time. This has significant implications for various sectors, including healthcare, where AI is used to diagnose diseases, and finance, where it helps detect fraudulent transactions. The integration of AI into technology promises to revolutionize industries and create new opportunities for growth.

Moreover, the internet of things (IoT) is connecting devices and systems in ways that were once the stuff of science fiction. IoT technology enables everyday objects, from home appliances to industrial machinery, to communicate and interact through the internet. This connectivity is creating smarter homes, more efficient supply chains, and improved urban infrastructure. As IoT continues to evolve, it holds the potential to further integrate technology into our lives, making them more convenient and efficient.

In summary, technology's rapid evolution is shaping the future in profound ways. From AI and renewable energy to IoT, these advancements are not only transforming industries but also addressing global challenges. As we continue to innovate and explore new frontiers, the possibilities for technology's impact on our world are boundless.



: Ishan Donga
2nd Year (IT Dept.)

Why India, with 1.5 Billion People, Still Fails to Win Medals

India, a nation with a population exceeding 1.5 billion, surprisingly underperforms in the realm of international sports. Despite its vast population, India's medal tally in the Olympics and other global competitions remains modest. This perplexing situation arises from various factors, including societal attitudes, parental mindset, and the nurturing of talent at the right time.

Societal Attitudes and Parental Mindset

- **Emphasis on Academics:** In India, there is a strong emphasis on academics, with a prevalent belief that education is the primary path to a secure and prosperous future. Parents often prioritize their children's academic achievements over their involvement in sports. This mindset results in limited support for sports as a viable career option.
- **Lack of Encouragement:** Many parents and society, in general, view sports as a hobby rather than a serious career. This lack of encouragement from an early age prevents children from pursuing sports with the same dedication as academics.
- **Risk Aversion:** The fear of an uncertain future in sports, coupled with the high risks associated with injuries and the limited number of successful athletes, deters parents from supporting their children's sporting ambitions.

Identification and Nurturing of Talent

- **Late Identification:** In many countries with successful sports programs, talent is identified and nurtured from a very young age. In India, the process of identifying talent often happens much later, reducing the chances of developing world-class athletes.
- **Lack of Professional Training:** Even when talent is identified, there is a lack of professional training and coaching. Access to high-quality coaches, nutritionists, and sports psychologists is limited, which affects the holistic development of athletes.
- **Balancing Education and Sports:** The Indian education system demands significant time and effort, leaving little room for rigorous sports training. Balancing academics and sports is a major challenge for young athletes, often forcing them to choose one over the other.

Cultural and Structural Challenges

- **Cultural Bias:** Certain sports are more culturally popular and receive more attention and resources, such as cricket. This bias limits opportunities for athletes in less popular sports to receive the necessary support and recognition.
- **Structural Issues:** Bureaucratic hurdles and corruption within sports federations can hinder the progress of athletes. Mismanagement and lack of accountability in sports organizations create obstacles for athletes trying to compete on the international stage



The Path Forward

For India to transform into a sporting powerhouse, several changes are necessary:

- **Changing Mindsets:** Encouraging parents and society to view sports as a viable career option and not just a pastime.
- **Improving Infrastructure:** Investing in sports facilities, especially at the grassroots level, to provide young athletes with the resources they need.
- **Early Talent Identification:** Developing programs to identify and nurture talent from a young age, ensuring continuous support and training.
- **Balanced Education System:** Creating a more flexible education system that allows students to pursue sports alongside academics.
- **Professional Training:** Providing access to world-class coaching, training facilities, and support systems for athletes.

India's potential in sports is immense, and with the right strategies and a supportive environment, the nation can achieve greater success on the global stage. The journey requires collective effort, investment, and a shift in societal attitudes towards sports.



:Presha Patel
3rd year (IT Dept.)

Twilight Serenity



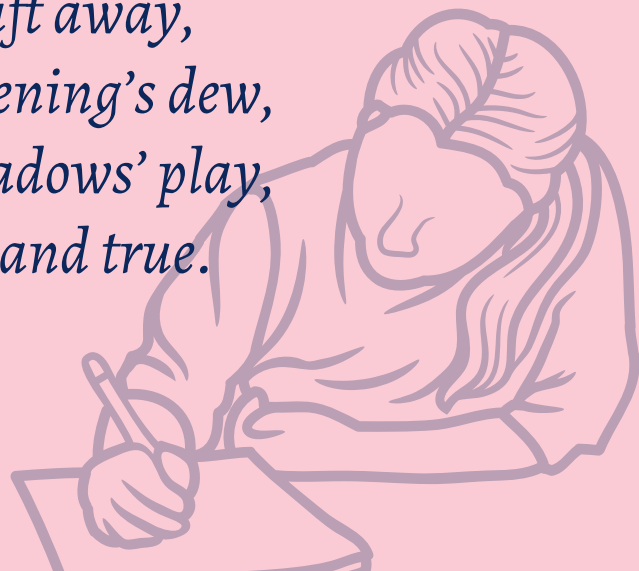
Dhairi Patel ; 1 st year ; IT Dept.

*In the stillness of the evening's grace,
Where twilight paints the sky in hues,
A quiet peace begins to trace,
The gentle calm that softly soothes.*

*The whisper of the evening breeze,
A lullaby for weary minds,
The world in quiet, rests at ease,
In tranquil moments, solace finds.*

*The stars emerge, a silver thread,
In vast, untroubled skies above,
Their distant light a gentle spread,
Of ancient calm and timeless love.*

*In stillness, worries drift away,
And calm descends like evening's dew,
Where peace resides in shadows' play,
And all is calm, serene, and true.*





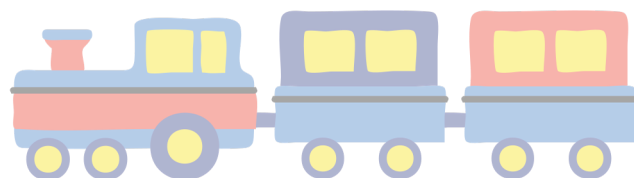
“बचपन”

Dhruvil Dadhich ; 1st Year; (IT Dept.)

बचपन की उन मासूम राहों पर,
जहाँ झूलों की खनक और हंसी बसी,
हर दिन था जैसे एक नई सुबह,
सपनों के रंगों में रंगी सी।

मिट्टी के खिलौनों की वो मस्ती,
सपनों की दुनिया में खोए रहते थे,
फूलों की खुशबू, खेल की धुन में,
हम बस खुशी के गीत गाते थे।
आज की दौड़ में, हम खो गए हैं,
भौतिक वस्तुओं की चकाचौंध में,
सपनों की वो मासूमियत खो दी है,
सपनों की दौड़ में हम बिछड़े हैं।
आँखों में चमक, दिल में सवाल,
क्या हम खो गए हैं इस माया में?

बचपन की खुशबू, यादों की मिठास,
अब सिर्फ एक आदत बन गई है।
बचपन की राहों की यादें सजीव,
दिल की गहराइयों में कहीं बसी हैं,
भौतिक जीवन की इस दौड़ में,
बचपन की मासूमियत हमें ढूँढनी है।



વિસ્મરણ

Dhruvil Hariyani ; 3rd Year; (IT Dept.)

કોઈ ની વિડંબના તો એની જાત સુધી ;
વીભુ ની કરતુત તો જો,

રગે રગ જાણ ના ઝલાહા તો સંધા દૈ;
મન તણી વ્યથા નથી સમજાવતો એ તો જો,
આ વીભુ ની કરતુત તો જો.

ખદાણ ના સોના ને ખેપટ બતાવે;
વળી ખેપટ નુ તો કાય ગજુ ખરું?
આ વીભુ ની કરતુત તો જો.

ચિરનિંદ્રા જેની છેલ્લી ઉંઘ છે ;
તે વળી હવે આ રાત કેટલી વહમી રય?
આ વીભુ ની કરતુત તો જો.

સરખા લોચ તણા ના ગળે નો ઉતર્યું ;
હવે તો અખંડ સમાધિ તો શું કાઠી ?
આવી ભુ ની કરતુત તો જો.

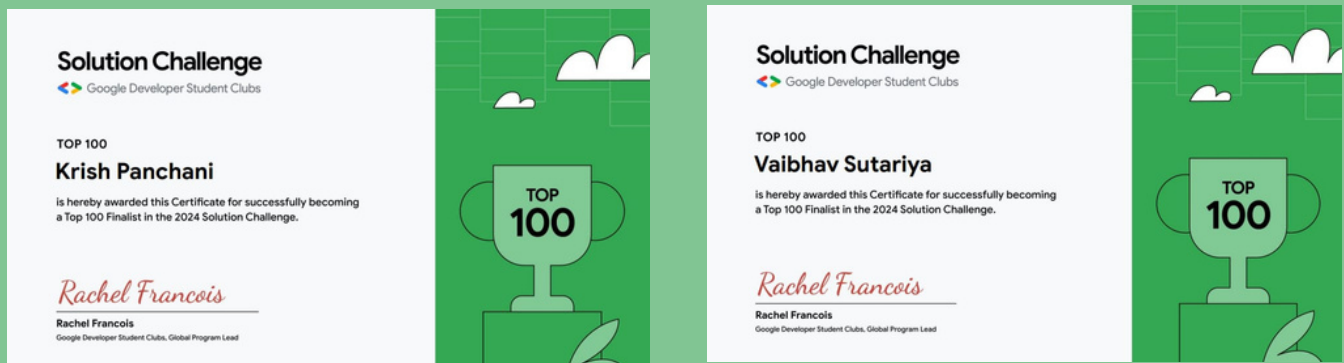
પિડા ની પરાકાષ્ટા વટાવી એમા શું;
પણ હવે આતમે મૂર્તિ કંડારી રયા ,
આ વીભુ ની કરતુત તો જો.

વીભુ ની કરતુત તો જો "એહ્-એ-વફા ",
અપેક્ષિ ત માણા ' ની વિ સ્મરણ ટેવા!!

-ઉહ્-ઉ-વફા



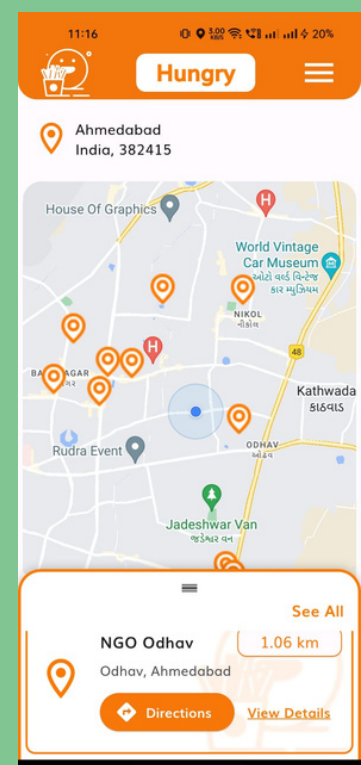
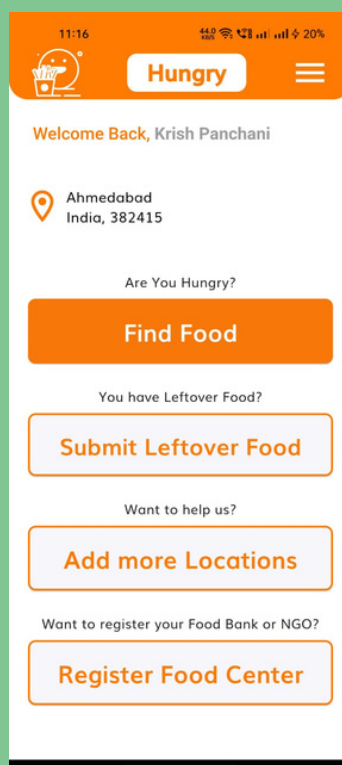
STUDENT'S ACHIEVEMENT



Krish Panchani and Vaibhav Sutariya; 6th Sem. IT student's project has been shortlisted among the top 100 solutions globally in the Google Developer Student Clubs' Solution Challenge.

Project Overview:

Our project, "Hungry," is a mobile application designed to combat food insecurity by providing a centralized platform for individuals to find nearby free food resources, donate surplus food to those in need, and contribute to expanding the database of available food locations. Leveraging technologies like Flutter, Firebase Realtime Database, and Google Maps API, our solution aims to address the United Nations' Sustainable Development Goal of Zero Hunger by promoting access to nutritious food and reducing inequalities in food distribution.

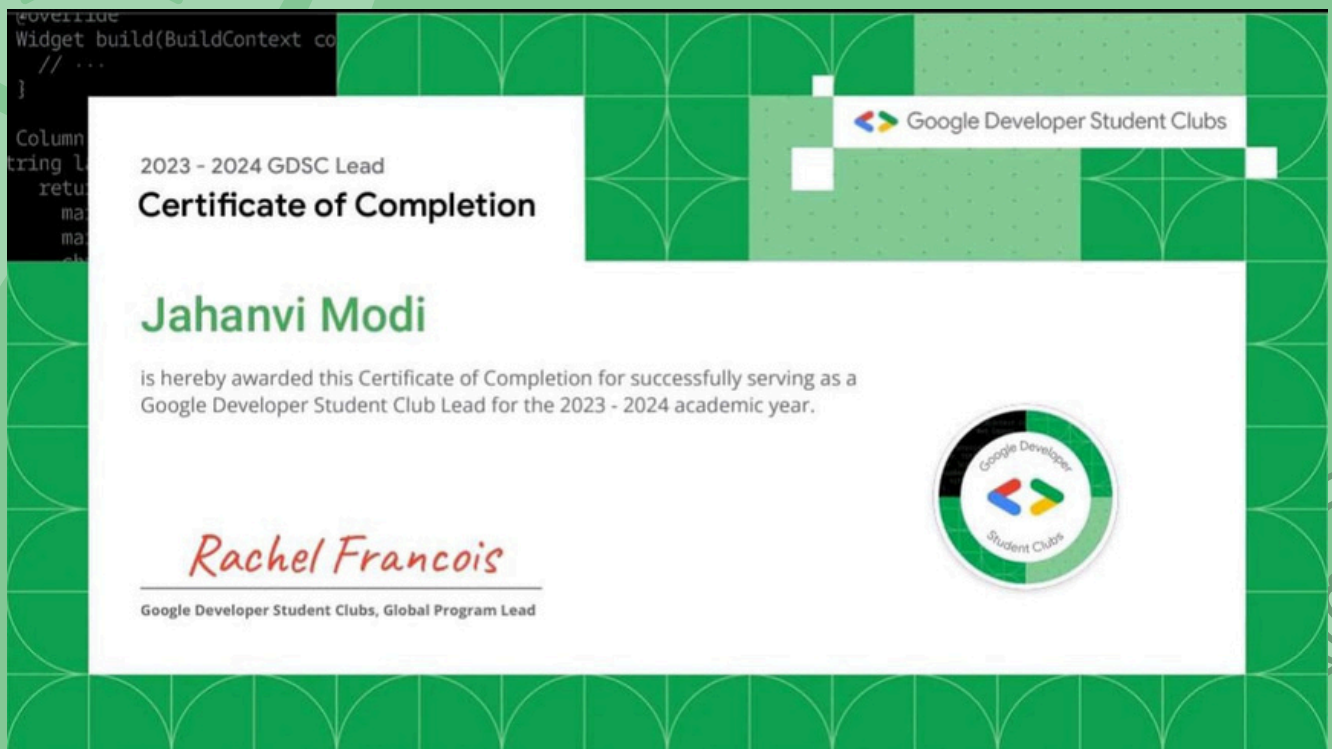


STUDENT'S ACHIEVEMENT

Google Developer Student Club Leads are passionate leaders at their universities who are dedicated to helping their peers learn and connect. Leads are undergraduate or graduate university students pursuing various degrees, yet have foundational knowledge of software development concepts.

Google collaborates with Leads and supports them as they start and grow their on-campus communities.

*Student of 7IT Jahnvi Modi selected as GDSC Lead in
GOOGLE DEVELOPER STUDENT CLUBS .*



STUDENT'S ACHIEVEMENT



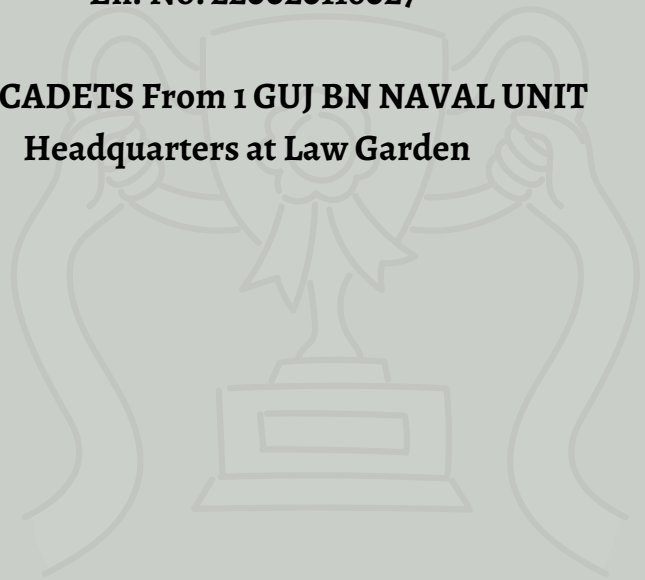
Akshatkumar J. Panchal
En.No: 220020116026

NCC CADETS From 1 GUJ BN NAVAL UNIT
Headquarters at Law Garden



Siddharth D. Panchal
En. No: 220020116027

NCC CADETS From 1 GUJ BN NAVAL UNIT
Headquarters at Law Garden



STUDENT'S ACHIEVEMENT

5 students from IT get Dewang Mehta toppers award for their academic achievement scheduled on 10/08/2023.

- PATEL NAITIK RATILAL 7 -IT
- BHAVSAR RAJVEE RAKESHKUMAR 5- IT
- DHARMIK MANUBHAI DUDHAT 5-IT
- MEET JAYESHBHAI KATARMAL 3-IT
- PATEL NAITIK RATILAL 8- IT
- LAKHANI ANISHA NANDKUMAR 8 -IT
- KOSHTI DIVYA SHARADKUMAR 1- IT



AIT team of KABBADI BOYS has been selected for inter zonal level and two of them selected for Inter University level match which was held in Neotech Institute of technology , Vadodara on 11/9/23.

Tarun Raygor 3 IT,
Ashish bhadvaniya 5 IT
Rutvik sureshbhai nathani-7 IT



STUDENT'S ACHIEVEMENT



Panchal Khushi received Gold Medal in Wushu at national level. And she has also qualified for an international level event in Wushu.

AIT team of BADMINTON GIRLS and BOYS been selected for team inter zonal level which was held in Sardar Vallabhbhai patel institute of Technology , Vadodara on 4/9/23
Romil KATHrotiya IT

Nilesh Gojiya -IT



STUDENT'S ACHIEVEMENT

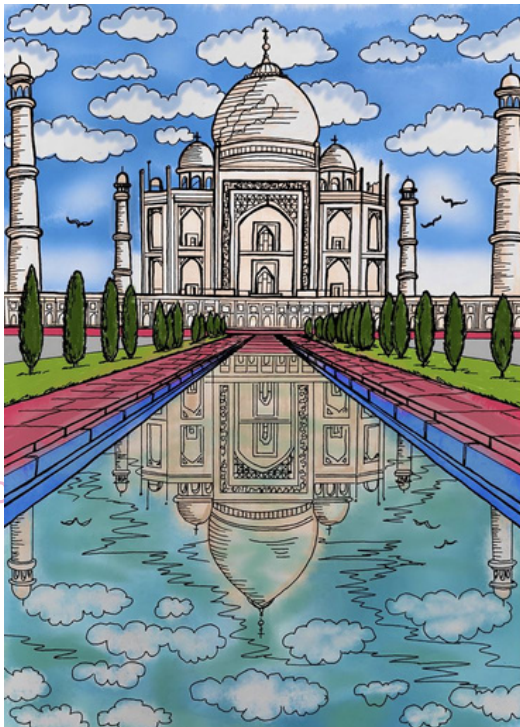


Students of 4th sem CE and IT participated in Ahmedabad 'AI summit' organized by Knowledge Chamber of Commerce and Industry and supported by I-Hub, Ahmedabad on 26 April 2024.

Art GALLERY



Dhruvi Patel
3rd year (I.T. Dept)



Hemal Patel
3rd year (I.T. Dept.)



Miss. Dhruvi Suthar
(I.T. Dept.)



Sketch



Nidhi Raval
(1st year) I.T



Shreya Gupta
(1st year) I.T



Tirth Barvaliya
(2nd year) I.T



QUIZ



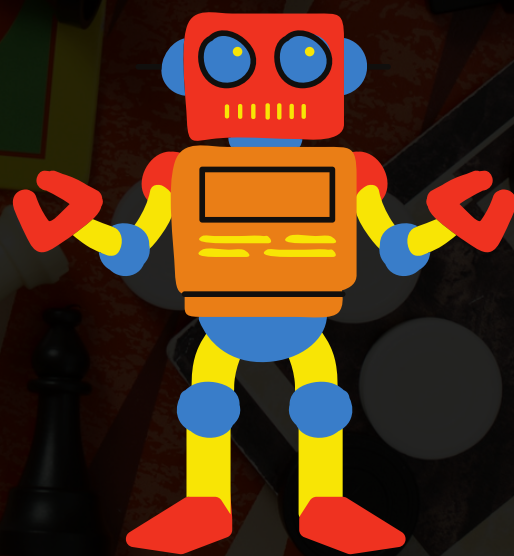
W
CROSS
R
D



GAAMES



VS



SUDOKU

Much like the body, our brain also requires regular workouts and what better way to do it than playing interesting puzzles and games that also keep one engaged. Playing Sudoku can not only improve concentration and memory for children, but for elderly it can keep Alzheimer's - the most common forms of dementia - away. The excitement of working on the game can also raise your happiness quotient plus prevent boredom.

	9				1			
			5	2		9		
			3			5	4	
1	8			4			2	
	2		1			4		5
3		7	2					8
				5	6			7
				1				
		1	4		8		9	

WORD SEARCH

E Z D D F A Q M S P Z F Z R Z M R G O D R Y B O
V X G E R P W E T U F A I V A A R A M R S E N R
I J Q Z E P X Z Q E S K W L Z B Y R H M K T B T
R T I B E L M Y W D N J E B E U L D C E C Y W N
D U Y H W I K O J S L R P R R N L O Y N R B E R
D G U U A C K Z U C C T E A A Y Y B O M V A T O
R L Q B R A G F M S J X M T G W O R X T B G Y K
A H F U E T L O O T E L W K N A E U V M J E B C
H E S V I I R V R L M G E R R I B R F Q I M O I
W F T N X O M W M O D E T D A H G T A D C C L L
P O N T U N L E P W S E S Z D B K I T H W M I C
G E D E E S S A D C R S R A B L L D T Y S E K E
L G O N T K U V R O B J E Y B R G L O Y A B E L
C D S D I W S R L E M B E C E A W U O C V R F B
F B M G Y W O I I Z H A U V O M T R N R L D Y U
L T I O J H D R D V K P I G G R Q A F E C I J O
R R O O O E O N K D K R I R U M P I D C M S C D
O E U O S Q W Z W C D U E R I Q E D T L D K Q K
T U C N B N N G O X U B P C E N Z M R Q L D L K
I B I I P B L D U I M V G C B P X E O O W R B S
N Y N T L H O V Z U C G I G A B Y T E R W I U H
O T P W A Y A D N B R O W S E R K J E I Y V N T
M E B T U Z D P J E G N N R E T N I R P K E H W
D P P J V O I Q Q T E E H S D A E R P S N P S O

Word Processor

Hard Drive

Kilobyte

Database

Window

Mouse

Byte

FAQ

Double Click

Disk Drive

Internet

Keyboard

Memory

Modem

Boot

Bug

Applications

Shareware

Gigabyte

Network

Folder

Menu

URL

Bit

Spreadsheet

IP number

Freeware

Browser

Driver

Icon

ROM

NIC

Scroll Bar

Tool Bar

Download

Printer

Virus

File

RAM

CPU

Peripheral

Megabyte

Diskette

Monitor

Click

Drag

GUI



EVEN TS

“ The Events section commences with a dynamic overview of our campus activities. Recently, a series of engaging and diverse events unfolded, showcasing a range of workshops, performances, and themed celebrations. These activities not only highlighted the talent and creativity within our community but also fostered a vibrant atmosphere of learning and camaraderie. With a focus on innovation and collaboration, these events provided valuable experiences and brought everyone together in a spirit of enthusiasm and growth. “



“GDSC CLUB”

Title: 'Demystifying Machine Learning: A Journey into Algorithms, Models, and Applications '

Organized a session to get an introduction to Machine Learning .

Participants : 90 Students of CE/IT/CSE Department.

Date and Time : 20th February 2024 (12:30 PM – 1:30 PM)

Resource Persons: Prof.Dhruvi Suthar (IT), Prof. Archana Jethava (CE).

Student coordinators: Krish Panchani (6th IT) ,Panchal Rushit (6th IT) ,Prachi Anarkat (6th CE) ,Vaishnavi Chawla (6th IT) , Mrudang Rana (2nd IT) , Çaurang Purohit (2nds CS) , Yash Oza (2nd DS).



Title: 'Git and GitHub Fundamentals: Empowering Developers ' Organized a session to get fundamental knowledge about Git and GitHub., awareness of Hacktoberfest Event, Open source contribution and manage own Projects on GitHub.

Participants : 86 Students of CE / IT Department

Date and Time : 16th October 2023 10:00 PM to 12:00 PM

Faculty organizers: Prof. Dhruvi Suthar, Prof. Namrata Gohel

Student coordinators: Jahanvi Modi (7th IT), Harsh Patel (7th IT), Abhay Patel (7th IT) ,Krish Panchani (5th IT)



"INDUSTRIAL VISITS"



CE/ IT Department arranged an industrial visit @ Vikram Sarabhai Space Exhibition (VSSE) to explore space technology by developing and deploying satellite communications and earth observations systems.



BISAG VISIT



“COE WORKSHOP”

(CENTRE OF EXCELLENCE)

Code Unnati recently hosted a workshop on technologies like Data Science and Machine Learning powered by SAP. This event provided participants with valuable insights and hands-on experience in cutting-edge technologies and industry best practices.

[COE Assessment]



[COE Workshop]



“TECHNOSPARK”

Our college recently hosted an exciting techfest featuring a diverse array of events, including workshops, seminars, competitions, dance performances, and much more. The festival provided a platform for students to showcase their talents and learn from industry experts



“DAYS CELEBRATION”

The campus recently organized a series of themed days, including Bollywood Day, Mismatch Day, Group Day, and Back to School Day. These celebrations brought creativity and fun to the environment, allowing students to express themselves and bond through various activities and dress codes.



“BOLLYWOOD DAY “



“BACK TO SCHOOL DAY”



“GROUP DAY “



“FRIENDSHIP DAY “



“MISMATCH DAY “

“VASANT PANCHAMI”

College celebrated Vasant Panchami with vibrant dances and cultural performances, marking the occasion with joy and enthusiasm. The event highlighted traditional customs and brought the community together in celebration of this auspicious festival.



“WOMEN’S DAY”

Institution recently celebrated Women’s Day with inspiring events and activities that honored the achievements and contributions of women. The day featured empowering talks, engaging performances, and vibrant discussions, all aimed at recognizing and celebrating women's roles in various spheres of life. This celebration fostered a supportive environment and highlighted the importance of gender equality and respect.



“SPORTS DAY”



“IIC”

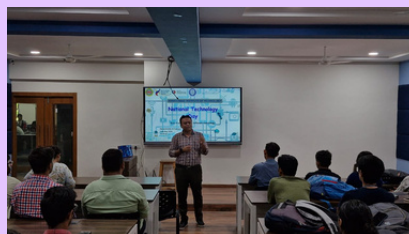
IIC

Institution's Innovation Council (IIC) - Ahmedabad Institute of Technology celebrated National Technology Day on 10/05/2024. A total of 62 students from CE, IT, EC, and Mechanical departments along with 5 faculties attended the Event. National Technology Day featured dynamic celebrations focused on diverse technological fronts including Cloud computing, CGI-VFX, LIDAR, and Cybersecurity. Students delivered a range of insightful presentations, delving into the intricacies and advancements within each domain. The event served as a catalyst for fostering interest, innovation, and expertise among the youth, driving forward the nation's technological prowess and resilience in an ever-evolving digital landscape.



IIC-2

Institutions Innovation Council (IIC) Club of Ahmedabad Institute of Technology celebrated World Intellectual Property Day on 26/4/2024. Total 75 students from CE, IT, EC, Mechanical department along with 15 faculties attended the session. Mr. Amitkumar Patel, a registered Indian Patent and Advocate, IP Laws Practitioner (Ministry of Commerce & Industry, Govt. of India) was the Guest Speaker. Session was about “Unlocking the power of Intellectual Property Rights - A comprehensive guide to IPR Awareness”.



“MEGA JOB FAIR”

JOB OFFER

MEGA JOB FAIR Jolly Hires
AT (AIT)
AHMEDABAD INSTITUTE OF TECHNOLOGY
11TH JAN 2024
AHMEDABAD

"Unlock Your Potential with Great Opportunities.."

Participating Companies

Jolly Hires IVORY
PranshTech Digital Science

REGISTER NOW 63574 12771



JOB

Ahmedabad Institute of Technology Placement Cell & quote ; कौशल्यम " organized Mega Job Fair2024 on 11 January 2024 wherein more than 300 students registered on the campus with having 30+placement confirmations. Total four IT companies of Gujarat named JollyHires, Ivory Technolabs, PranshTech Solutions and Digital Science Web Technologies participated and arranged the interview rounds for the students at the campus.

CAREER

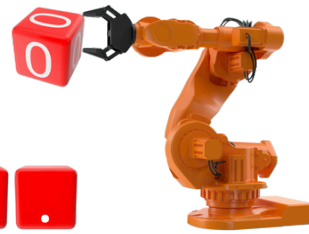
JOB



Faculty Article & Publication



INDUSTRY 4.



Industry 4.0 represents the fourth industrial revolution, a transformative shift in manufacturing and production. This evolution is characterized by the integration of digital technologies, cyber-physical systems, the Internet of Things (IoT), big data, and artificial intelligence (AI) into traditional industrial processes. This convergence is reshaping industries by creating smart factories that are more efficient, flexible, and responsive to the ever-changing demands of the global market.

At the core of Industry 4.0 is the concept of interconnectivity. Machines, sensors, and devices within a factory are connected through the IoT, enabling seamless communication and data exchange. This real-time data flow allows for the continuous monitoring of production lines, predictive maintenance, and the optimization of resources, leading to significant cost savings and a reduction in downtime. The ability to collect and analyze vast amounts of data also empowers businesses to make informed decisions, improve product quality, and enhance customer satisfaction.

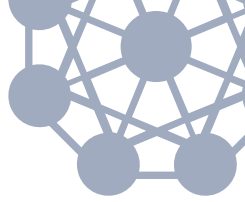
Another critical aspect of Industry 4.0 is automation. Advanced robotics and AI-driven systems are taking over repetitive and dangerous tasks, allowing human workers to focus on more complex and creative endeavors. This shift not only improves workplace safety but also drives innovation by freeing up human potential.

Moreover, Industry 4.0 paves the way for mass customization, where products can be tailored to individual customer needs without compromising efficiency. This is made possible by flexible manufacturing systems that can adapt to different production requirements on the fly.

In conclusion, Industry 4.0 is revolutionizing the way we produce and consume goods. It is fostering a new era of smart manufacturing where digital technologies are seamlessly integrated with physical processes. As businesses embrace this transformation, they will not only enhance their competitive edge but also contribute to a more sustainable and innovative future.

: Mr. Vipul Patel





Latest Innovation in Blockchain Technology

Another significant development is the emergence of non-fungible tokens (NFTs), which utilize blockchain to authenticate ownership and uniqueness of digital assets like art, music, and collectibles. NFTs have opened new avenues for creators to monetize their work and for collectors to securely trade digital goods.

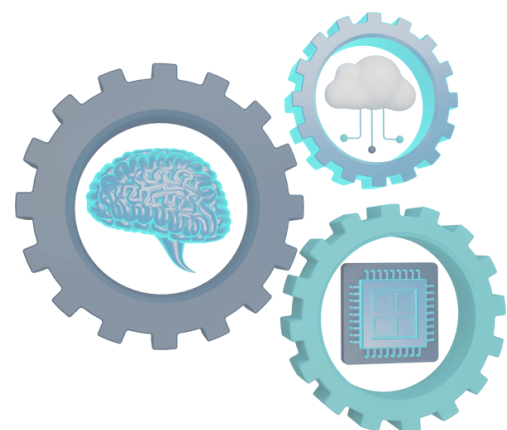
Additionally, advancements in blockchain interoperability are enabling different blockchain networks to communicate and share data seamlessly, enhancing scalability and fostering collaboration across decentralized ecosystems.

These innovations underscore blockchain's transformative potential beyond cryptocurrencies, promising to redefine how we exchange value, verify authenticity, and conduct business in the digital age.

Blockchain technology continues to evolve with ground breaking innovations reshaping industries worldwide. One of the latest advancements is the rise of decentralized finance (DeFi), leveraging blockchain's transparency and security to revolutionize traditional financial services. DeFi platforms enable peer-to-peer lending, borrowing, and trading without intermediaries, offering users greater control over their assets and lower transaction costs.

Moreover, blockchain's integration with supply chain management is enhancing transparency and traceability, ensuring authenticity and reducing fraud in global trade. Companies are utilizing blockchain to track products from source to consumer, improving efficiency and consumer trust.

: Miss Vanita Dhandhwani




High Capacity Coverless Information Hiding: A Survey

BY : DR. HARSHA PADHERIYA

In recent years, the rapid development of computer network and digital multimedia technologies has contributed in the development of information concealing. Digital content typically contains the concealed information for copyright protection or private communication. Image steganography, whose objective is to employ cover images to hide a little quantity of secret information, is presently one of the most challenging situations and problems in the world of data security. Coverless image steganography, as opposed to traditional image steganography, modifies the image attributes rather than the cover image to deliver a secret message. As a consequence, The image's security is significantly increased, and the likelihood that steganalysis tools will recognise it is greatly decreased. Its fundamental tenet is to evaluate image qualities and link them to important data. This article includes several coverless steganography techniques as well as a summary of fundamental techniques based on hashing techniques, mapping relationships, and feature extraction. In conclusion, current approaches are examined, and potential future employment options are suggested.

Keywords: Image Steganography, coverless image steganography, information hiding, information security, DCT, DWT, DFT, GAN, DGAN.



**Intellectual
Property
Office**

Certificate of Registration for a UK Design

Design number: 6365222
Grant date: 17 May 2024
Registration date: 10 May 2024

This is to certify that,

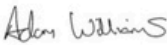
in pursuance of and subject to the provision of Registered Designs Act 1949, the design of which a representation or specimen is attached, had been registered as of the date of registration shown above in the name of

Dr. Ankit D. Oza, Bitai Patel, Dr. Vishruti Desai, Dr. Ashish Chaurasia, Puja Chaturvedi, Prachi Patel, Dr. Jimmy Karloopia, Dr. Julfekar Arab, Dr. Harsha Padheriya, Dr. Maitri Patel

in respect of the application of such design to:

CENTRIFUGAL MACHINE FOR PATHOLOGY APPLICATIONS

International Design Classification:
Version: 14-2023
Class: 24 MEDICAL AND LABORATORY EQUIPMENT
Subclass: 01 APPARATUS AND EQUIPMENT FOR DOCTORS, HOSPITALS AND LABORATORIES


Adam Williams
Comptroller-General of Patents, Designs and Trade Marks
Intellectual Property Office
The attention of the Proprietor(s) is drawn to the important notes overleaf.

Intellectual Property Office is an operating name of the Patent Office www.gov.uk/ipco



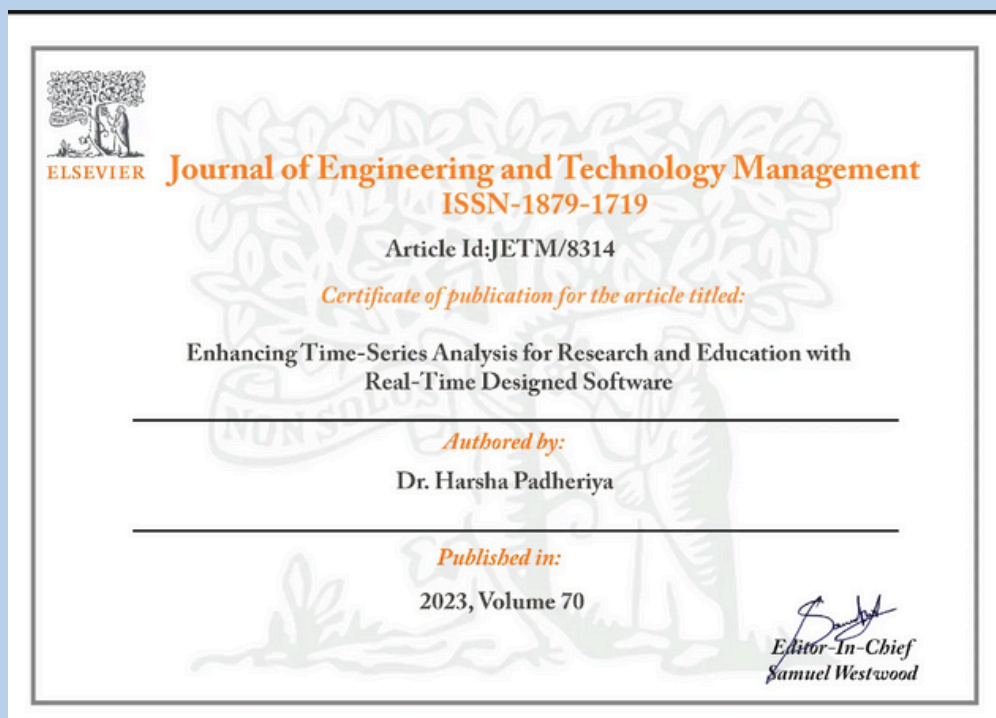
Enhancing Time-Series Analysis for Research and Education with Real-Time Designed Software

BY : DR. HARSHA PADHERIYA

Abstract

This study aimed to develop a real-time designed software for statistical analysis and compare its effectiveness with traditional software. The research design followed a quantitative approach, with data collection and analysis conducted using both types of software. The software development process involved designing an intuitive user interface and incorporating advanced features for complex statistical analyses. The results showed that the real-time designed software provided faster and more accurate results, especially for complex analyses. The interpretation of the data revealed significant differences in the output of the two software types. The conclusion suggests that the real-time designed software is a promising alternative to traditional software for statistical analysis, offering several advantages, such as real-time results and user-friendliness. However, further testing and validation are required to improve its accuracy and reliability.

Keywords: Real-time software, traditional software, data analysis, software development, validation data, user-friendly, intuitive, complex analyses, real-time results.



“PLACEMENT”

Congratulations

NATHANI RUTVIKKUMAR
INFORMATION TECHNOLOGY

PACKAGE : 3.5 LPA

For securing Placement at



BODARYA VRUSHABH PRAVINBHAI
INFORMATION TECHNOLOGY

PACKAGE : 5.5 LPA

For securing Placement at



VACHHETA RISHABH RAJUBHAI
INFORMATION TECHNOLOGY

PACKAGE : 5.0 LPA

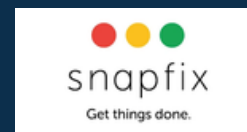
For securing Placement at



PATEL KRUSHANK
INFORMATION TECHNOLOGY

PACKAGE : 5.0 LPA

For securing Placement at



PATEL ABHAY SHIVPRAKASH
INFORMATION TECHNOLOGY

PACKAGE : 3.5 LPA

For securing Placement at



GAVDE NEHA
INFORMATION TECHNOLOGY

PACKAGE : 5.0 LPA

For securing Placement at



“PLACEMENT”

DESAI JEEL JIVANBHAI
INFORMATION TECHNOLOGY

PACKAGE : 5.0 LPA

For securing Placement at



MALANI VIRAG BHARATKUMAR
INFORMATION TECHNOLOGY

PACKAGE : 3.5 LPA

For securing Placement at



MISTRY RITESH VISHNUBHAI
INFORMATION TECHNOLOGY

PACKAGE : 3.5 LPA

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RUDRA KALPESHKUMAR PATEL
INFORMATION TECHNOLOGY

PACKAGE : 3.5 LPA

For securing Placement at



GEVARIYA KRISH
INFORMATION TECHNOLOGY

PACKAGE : 5.0 LPA

For securing Placement at



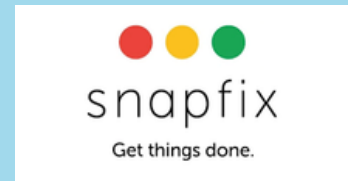
RAJVEE BHAVSAR
INFORMATION TECHNOLOGY

For securing Placement at

PACKAGE : 2.75 LPA



“OUR RECRUITERS”



"MOU"

**PLACEMENT CELL MOU
WITH
VIRTUAL HEIGHTS PVT
LTD**



**MONDAY,
08 APRIL, 2024**



**PLACEMENT CELL MOU
WITH
PRP TECHNOLOGIES**



**THURSDAY,
04 APRIL, 2024**



MOU with Demisttos



Virtual Heights



**Matrix Institute of Technology Flex
Pixel Private Limited
Pixel Matrix Solutions LLP
Matrix Migration Services**



IBM Skills Build



TCS



**PRP
TECHNOLOGIES**

“ALUMNI SAYS”



Name: Himanshi Soni

Department: IT

Current Designation: QA Engineer

Current Company and location: Bangalore

As an alumna of Ahmedabad Institute of Technology, my journey at AIT is one that I reflect on with great appreciation. It was here that I found my passion for engineering and developed the skills that have been crucial in my professional life. The institute's rigorous academic environment challenged me to push my limits, while the dedicated faculty provided the support and guidance necessary for my growth. Their encouragement played a significant role in helping me build the confidence to pursue my ambitions.

AIT was more than just a place of study; it was a community that fostered personal and professional development. The vibrant campus life, with its multitude of events and student activities, offered me opportunities to explore new interests and forge meaningful connections. The experiences I gained outside the classroom were just as impactful as those within, shaping me into a well-rounded individual ready to take on the challenges of the real world.

Today, as I look back on my time at AIT, I feel a deep sense of pride in being a part of its legacy. The values and lessons I learned there have been my guiding principles, helping me navigate my career with confidence and purpose. Being connected to such a distinguished group of alumni is an honor, and I'm proud to carry forward the spirit of AIT in all that I do.

"ALUMNI SAYS"

Name: Heena Thakor

Department: IT

Current designation: Project Lead

Current Company and location: X-Byte
Enterprise Crawling, Ahmedabad



As an alumna of Ahmedabad Institute of Technology, my time at AIT is something I cherish deeply. It was here that I discovered my passion for engineering and technology, and the institute's rigorous academic curriculum laid a strong foundation for my career. The dedicated faculty at AIT played a pivotal role in my journey, providing the guidance and support needed to excel. Their commitment to student success inspired me to push my boundaries and strive for excellence.

AIT offered much more than just academics. The vibrant campus life allowed me to explore various interests and develop a well-rounded perspective. From participating in technical fests to being actively involved in student organizations, these experiences helped me grow both personally and professionally. The friendships and connections I made during this time are lasting, and they continue to enrich my life.

Reflecting on my time at AIT, I feel immense pride in being a part of such a distinguished community. The values and skills I gained during my years at the institute have been my guiding principles throughout my career. AIT instilled in me a sense of purpose, resilience, and a commitment to continuous learning—qualities that I carry with me every day. I am honored to be a part of AIT's legacy and to contribute to its ever-growing network of accomplished alumni.

“ALUMNI SAYS”



Name: Rushi Thakkar

Department: IT

Current designation: Technology Manager

Current Company and location: Deloitte, San Francisco Bay area, California.

As an alumnus of Ahmedabad Institute of Technology, my time at AIT holds a special place in my heart. It was at this institute that I first discovered my passion for technology and engineering. The rigorous academic curriculum, coupled with the support of knowledgeable and dedicated faculty, provided me with a strong foundation that has been instrumental in shaping my career. Their guidance and encouragement pushed me to strive for excellence and to continuously challenge myself.

Beyond academics, AIT offered a vibrant campus life that allowed me to explore my interests and grow as an individual. Whether it was participating in technical fests, engaging in student organizations, or collaborating on innovative projects, these experiences enriched my journey and helped me develop a well-rounded perspective. The friendships and connections I made during this time are lasting, and they continue to be a source of support and inspiration.

Looking back, I am immensely proud to be a part of the AIT community. The values and skills I acquired during my time at the institute have been my guiding principles throughout my professional journey. AIT instilled in me a sense of purpose and resilience that I carry with me today, and I am honored to contribute to the legacy of such a distinguished institution.

CHIEF EDITOR

Dear Readers,

Welcome to this special edition of our magazine PIXEL 2024 . It is with great pride and enthusiasm that we present to you a collection of stories, insights, and features that reflect the spirit and creativity of our contributors.

Creating this magazine has been a labor of love. Each article, image, and design element has been carefully crafted with you, our reader, in mind. Our dedicated team of writers, editors, designers, and photographers have poured their hearts into this project, ensuring that every page resonates with quality and purpose.



Behind the scenes, countless hours have been spent brainstorming ideas, researching topics, and refining content to bring you a magazine that is not only informative but also inspiring. We've sought out the latest trends, engaged with industry experts, and tapped into the creative minds within our community to curate a publication that truly stands out.

This magazine is more than just a collection of pages; it's a reflection of our shared passion for storytelling and a testament to the power of collaboration. We hope that as you turn each page, you'll find something that sparks your curiosity, fuels your imagination, and perhaps even challenges your perspective.

Thank you for being a part of our journey. Your support and engagement are what drive us to continually raise the bar and deliver content that matters. We invite you to explore, enjoy, and immerse yourself in this issue, knowing that it was created with the utmost care and dedication.

Happy reading!

Warm regards,
Dr. Harsha Padheriya
Chief Editor

FACULTY EDITOR

Dear Students and Readers,

As we navigate through the ever-evolving landscape of education and technology, it is heartening to see the creativity and passion reflected in the pages of this magazine. Each article, project, and story is a testament to the dedication and hard work of our students, who continue to push boundaries and explore new horizons.



This magazine is not just a collection of words and images but a celebration of the diverse talents and passions that drive our students. It's a space where they can express their ideas, share their achievements, and inspire others. I am incredibly proud of the contributions made by everyone involved.

I would like to extend my heartfelt thanks to the contributors and the editorial team for their unwavering commitment to making this publication a success. Your efforts have truly brought out the best in our students and highlighted the spirit of our institution.

May this magazine continue to inspire creativity and foster a love for learning among all its readers.

Let us continue to strive for knowledge, innovation, and creativity, and together, we can build a brighter future.

Happy reading!

Miss. Apexa Bhavsar
Faculty Editor

FACULTY EDITOR

Dear Readers,

It is with immense pride that I share with you this edition of our magazine. As the Faculty Editor, I have had the privilege of working closely with a group of exceptionally talented students and colleagues who have devoted themselves to making this publication a reality. Every article, feature, and design you see is the result of thoughtful planning, meticulous research, and a passion for excellence. Our team has worked tirelessly to ensure that each page reflects the high standards we hold ourselves to, and we are excited for you to experience the fruits of our labor.



This magazine is more than just a project; it's a reflection of our shared commitment to education, creativity, and innovation. Through the diverse content we've curated, we hope to engage your curiosity, spark meaningful conversations, and provide insights that resonate with your interests. It has been an honor to guide and support the talented individuals who contributed to this issue, and I am confident that their hard work and dedication will shine through in every piece you read.

Thank you for being a part of our journey, and I hope you enjoy this issue as much as we enjoyed creating it.

Sincerely,
Miss Ripal Patel
Faculty Editor

EDITORIAL TEAM

Hello Everyone,

We are excited to share this edition "PIXEL 2024" of our magazine with you. As the student editorial team, we've worked hard to bring you content that is both engaging and inspiring. Each of us contributed our unique skills and perspectives, making this magazine a true collaboration.

This issue is the result of many hours of dedication and teamwork. We hope you find it as rewarding to read as it was for us to create. Thank you for your support, and happy reading!

Best regards,

The Student Editorial Team



RAVI SAVALIYA



PRESHA PATEL



MANTHAN VASOYA



PARTHIV BAGASARIYA



TIRTH PATEL