



Byte - I  
JULY-2023  
*Bits & Bytes*

# *Bits & Bytes*

**EC NEWSLETTER**

## **Ocean Of Career Opportunity in Electronics & Communication**

### **VISION**

To impart excellent technical education for developing ethically sound and globally competent skills to girls opting for engineering as a career in the revolutionizing era of electronics and communication.

### **MISSION**

- To provide a creative environment for innovation in the field of Electronics & Communication through structured teaching learning process.
- To create a platform for effective interaction between Industry and Institute.
- To contribute to societal needs through innovation.
- To inculcate a self-learning attitude, environment skills and professional ethics among students so as to enable them to contribute for sustainability of environment and serve the society.



**ELECTRONICS AND COMMUNICATION ENGINEERING DEPARTMENT**

**GOVERNMENT POLYTECHNIC FOR GIRLS  
OPP. PRL, GUJARAT UNIVERSITY ROAD, NAVARANGPURA, AHMEDABAD – 380 015**





या कुन्देन्दुतुषारहारधवला या शुभ्रवस्त्रावृताया  
वीणावरदण्डमण्डितकरा या श्वेतपद्मासना।  
या ब्रह्माच्युत शंकरप्रभृतिभिर्देवैः सदा वन्दिता  
सा मां पातु सरस्वती भगवती निःशेषजाड्यापहा ॥1॥

जो विद्या की देवी भगवती सरस्वती कुन्द के  
फूल, चंद्रमा, हिमराशि और मोती के हार की तरह  
धवल वर्ण की हैं और जो श्वेत वस्त्र धारण करती हैं,  
जिनके हाथ में वीणादण्ड शोभायमान है,  
जिन्होंने श्वेत कमलों पर आसन ग्रहण किया  
है तथा ब्रह्मा, विष्णु एवं शंकर आदि देवताओं  
द्वारा जो सदा पूजित हैं, वही संपूरण जड़ता  
और अज्ञान को दूर कर देने वाली  
माँ सरस्वती हमारी रक्षा करें॥1॥

## Acknowledgment

Electronics and Communication Engineering Department of Government Polytechnic for Girls, Ahmedabad feels thrilled to present its genuine stakeholders “Bits & Bytes” a semester newsletter. This newsletter “Bits & Bytes” started with an objective of knowledge sharing and spreading divergent activities of Electronics and Communication Engineering Department. We would also like to focus on new developments in Electronics and Communication field, latest ongoing and upcoming trends and events, previous month's news and events.

We consider, a newsletter “Bits & Bytes” as a best place to appreciate the students, faculty members and stake holders for their achievements. We hope, this newsletter provides necessary motivation to the stake holders as well as also very much helpful to update our knowledge of fast growing Electronics and Communication field.

Finally, we would like to expand our deepest gratitude to all members who directly or indirectly involved and give their valuable support for making this newsletter “Bits & Bytes”. We know that without grace of all mighty GOD this thing is not possible. So, hereby we present the first Bit (Volume) of “Bits & Bytes”.

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## **Message from Principal's Desk**



**Prof. B. B. SONEJI**

**“Technology is the Gift of God. After the gift of life, it is perhaps the greatest God's gifts. It is the mother of civilization, of arts and of sciences.”**

**-Freeman Dyson**

Government Polytechnic for Girls - Ahmedabad (GPGA), a premier diploma engineering institute was established in the year 1968 with the aim to provide technical education to girls in the heritage city of Ahmedabad. It is located right opposite to PRL and adjacent to ATIRA, in the throbbing educational hub within the heart of the city and in the vicinity of reputed institutes like L.D.College of Engg., Gujarat University, L.M.College of Pharmacy and the world renowned CEPT University. It is endowed with a beautiful green campus which has its own flora and fauna.

At present, GPGA offers 3-year diplomas in 6 programmes under Commissionerate of Technical Education and is affiliated with Gujarat Technological University (GTU). These are Diplomas in Architecture Assistantship (DAA), Biomedical Engineering (DBE), Computer Aided Costume Design and Dress Making (DCACDDM), Civil Engineering (DCE), Computer Engineering (DCoE), Electronics and Communication Engineering (DEC) and Information Technology Engineering (ITE).

GPGA has a tradition of imparting quality technical knowledge and ethical values to the students. No wonder GPGA is ranked among top 10 government diploma engineering colleges in Gujarat consistently over the last five years.

For years, the institute's major focus and concern have been our students and our institution strives to impart the best knowledge in respective fields for promoting and pursuing multidisciplinary diploma engineering in the most disciplined manner. Every student of the



institute has been among some of the best talents of the vibrant state of Gujarat. Many of GPGA's alumnae have established themselves as entrepreneurs while some have continued higher studies with well-known engineering institutes of India as well as abroad. Thus, they have carved a niche for themselves in various technical fields throughout the state, our nation and even abroad.

The institute has an excellent track record of placements in past few years and students of GPGA have proved their mettle in industry, academics, and administration over the last many years. This glory has been due to the synergetic efforts of management, learned faculty, dedicated staff and sincere students over these years. I urge everyone, including staff and students, to make excellent careers by availing the unique opportunity that GPGA provides through classroom teaching, laboratory instructions, industrial trainings and participation in sports, cultural and other extra-curricular activities of interest. Recently, formation of GPGA's Alumnae Association has also been undertaken.

During the current academic year, three programmes of GPGA i.e. DCACDDM, DCE and DCoE have initiated the process of application for Accreditation with NBA. For the faculty and administrators, accreditation promotes ongoing self-evaluation and continuous improvement and provides an effective system for accountability. For the institute or programme, accreditation enhances its national reputation and represents peer recognition. Thus to further the institute's aim towards excellence, accreditation process has been undertaken. I extend my best wishes to all staff members and students of these programmes for getting accredited in the year 2021.

I express my sincere gratitude to all our stakeholders for their continued support, cooperation and active involvement to make GPGA a citadel of Technical Learning, which sets its own benchmark.



## **Message from HOD's Desk**



**Prof. T. P. Chanpura**

Dear Readers,

It gives me great pleasure to present you this second Bit (Volume 2) of July 2020. This is a platform for students as well as faculty members and other stakeholders like industrialists, alumnae and other faculty members of peer institutes of electronics and communication engineering. At this juncture, I would like to thank all my faculty members those who have participated directly or indirectly in editing, proof reading and designing this Bit and implementing my idea and realizing thought in to reality with quite committed platform for technological, innovative, creative skills and forth coming development in field of electronics and communication as well as its diversification for enhancing lifelong learning and project management with team building skills.

I acknowledge the efforts put by my students' team of Bits & Bytes and faculty members of electronics and communication engineering department. Now onwards M. R. PANCHAL will coordinate the same with students and faculty team.

I acknowledge my sincere thanks to Industry advisory Mr Ashwin Ruparelia, CEO- Eurotechpower Controls and Mr Pratik Parmar, CEO- Crear Electronics for their continuous interaction with faculty members and EC students.

Keep it up!!!



## AI AND MACHINE LEARNING

Artificial Intelligence (AI) and Machine Learning (ML) are two related yet distinct concepts within the field of computer science. AI is a broader concept that aims to create intelligent machines capable of simulating human thinking and behavior. It involves various techniques, including rule-based systems, logic programming, and machine learning algorithms.

On the other hand, ML is a subset of AI that focuses on enabling machines to learn and improve from data without explicit programming. ML algorithms analyze large datasets, identify patterns, and generate models that can make predictions or decisions based on new data. This learning process improves the model's performance over time as it is exposed to more data.

AI and ML have numerous applications across various industries, including healthcare, finance, manufacturing, and education. They can be used for predictive analytics, natural language processing, computer vision, and robotics, among other applications. By combining AI and ML, organizations can process and analyze large volumes of data, drive better decision-making, generate recommendations and insights in real-time, and create accurate forecasts and predictions.

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In summary, AI is a broader concept that includes various techniques and strategies for creating intelligent machines, while ML is a specific application of AI that focuses on enabling machines to learn and improve from data. Both AI and ML have numerous applications and benefits across various industries, making them essential tools for modern computing and data analysis.



## CLLOUD COMPUTING

Cloud computing is a technology that enables users to access and utilize computing resources over the internet instead of relying on local servers or personal computers.

It offers on-demand availability of computing resources, such as storage, infrastructure, and software, eliminating the need for individuals and businesses to manage physical resources themselves.

Cloud computing service models include Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS).

IaaS provides virtualized resources, PaaS offers features for application deployment, and SaaS provides fully managed functional software as a service over the internet.

Cloud computing also offers various networking technologies, such as wide-area networks (WAN), load balancers, content delivery networks (CDNs), and software-defined networking (SDN), to ensure data flows quickly, easily, and securely between front-end users and back-end resources.

Cloud computing relies heavily on the virtualization of IT infrastructure, such as servers, operating system software, networking, and other infrastructure, which are abstracted using special software to pool and divide resources.

In summary, cloud computing is a technology that offers on-demand availability of computing resources, such as storage, infrastructure, and software, over the internet. It offers various benefits, including flexibility, efficiency, strategic value, security, and cost-effectiveness. Cloud computing service models include IaaS, PaaS, and SaaS, and there are three main types of cloud computing deployment models: public cloud, private cloud, and hybrid cloud. Cloud computing also offers various networking technologies and relies heavily on the virtualization of IT infrastructure.



## College News and Events:

- On 13<sup>th</sup> march , tutor from Alpha Tech Automation had come to our college and they had taught us Basic of Arduino and how coding is done.
- On 13<sup>th</sup> February World Radio Day , our college had a program in which radio related and different Antenna related information was given.



- The Electronics and Communication Department of Government Polytechnic for Girls Ahmedabad proudly organized "Techno Spring", a vibrant and engaging technical event designed to showcase innovation, creativity, and technical prowess among students. The event served as a platform for students to explore emerging technologies, collaborate on innovative projects, and demonstrate their skills in a competitive yet collaborative environment.
- Techno Spring featured a wide array of activities, including technical quizzes, project demonstrations, coding challenges, robotics competitions, and hands-on workshops. The event also invited industry experts and alumni to deliver insightful sessions on the latest advancements in technology, career guidance, and entrepreneurial opportunities.

- The Electronics and Communication Department of Government Polytechnic for Girls Ahmedabad organized an inspiring seminar titled "**Be Voice, Never Be Echo**" on **February 21, 2024**. The event aimed to empower students to embrace their individuality, develop self-confidence, and cultivate leadership qualities to stand out in today's competitive world.

The seminar featured dynamic sessions by esteemed speakers who emphasized the importance of originality, critical thinking, and effective self-expression. Participants were encouraged to share their perspectives, step out of their comfort zones, and foster a mindset of proactive leadership.





## **PROFESSIONAL DEVELOPMENT**

1) Ms. K.N. CHAUDHARI have successfully completed 8 weeks NPTEL ONLINE certification course which is approved for faculty development program by AICTE on “Leadership and Team effectiveness” during Jan-April 2023 conducted by IIT, Madra.

2) Mr. G. M. MAKAVANA have successfully completed 8 weeks NPTEL ONLINE certification course which is approved for faculty development program by AICTE on “Communication Skill Modes and Knowledge” during Jan-April 2023 conducted by IIT, Roorkee.

3) Mr. M.R. PANCHAL have successfully completed 8 weeks NPTEL ONLINE certification course which is approved for faculty development program by AICTE on “Guidance and Counselling” during Jan-April 2023 conducted by IIT, Kanpur.

4) Ms. G. D. AMIN have successfully completed 8 weeks NPTEL ONLINE certification course which is approved for faculty development program by AICTE on “Communication Skill Modes and Knowledge” during Jan-April 2023 conducted by IIT, Roorkee.

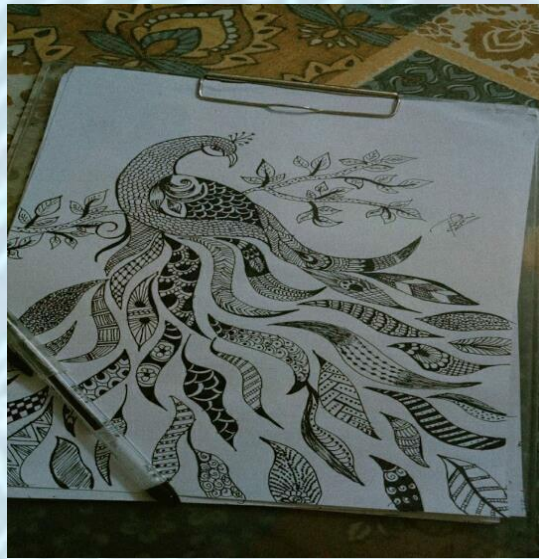
5) Ms. V.L.GANGANI have successfully completed 8 weeks NPTEL ONLINE certification course which is approved for faculty development program by AICTE on “Communication Skill Modes and Knowledge” during Jan-April 2023 conducted by IIT, Roorkee.

## **ARTS MADE BY STUDENT**

{ Dhruva Dhamsaniya , Prachi Soni }









**Achievement Of Student :**



News Letter Made By:  
Dhruva Dhamsaniya  
Nikita Chaudhary





## VISION

To carve a brighter prospect for the nation through excellence in technical education for fostering skills, ethical values and environmental consciousness among girl students while undertaking existing and forthcoming challenges.

## MISSION

- To nurture technical and creative skills through quality education.
- To strengthen industries interaction.
- To impart real life problem solving skills.
- To foster care for sustainability of environment and importance of social responsibility among girl students.

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