Centenary Celebrated Sharnbasveshwar Vidya Vardhak Sangha's











ELECTRO21K

FACULTY OF ENGINEERING AND TECHNOLOGY (EXCLUSIVELY FOR WOMEN)

SHARNBASVA UNIVERSITY KALABURAGI

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING



MAGZINE-2021



MAHADASOHI SHRI SHARNBASVESHWAR

A saint of the 18th century known for his Dasoha (Giving is Earning) and Kayaka. Shri Sharnbasveshwar preached what he practised out of a desire to assist humanity. He made a significant contribution to society. He aimed to make society more equitable and to bring out its best qualities. After his death, a shrine with a Mahadasoha Peetha was erected in his honour.



Poojya Doddappa Appa

7th Mahadasoha Peethadhipati Sharnbasveshwar Samsthan Founder President Sharnbasveshwar Vidya Vardhak Sangh



"Vidya Bhandari" Poojya Dr. Sharnbaswappa Appa

8th Mahadasoha Peethadhipati, Sharnbasveshwar Samsthan, President, Sharnbasveshwar Vidya Vardhak Sangha Chancellor, Sharnbasva University, Kalaburagi Trustee, Poojya Dr. Sharnbaswappa Appa Family Trust, Sharnbasveshwar Samsthan



Poojya Matoshree Dr. DakshayinS.Appa

Chairperson, Sharnbasveshwar Vidya Vardhaka Sangha, Member, Board of Governor Member, Board of Governor Trustee, Poojya Dr. Sharnbaswappa Appa Family Trust, Sharnbasveshwar Samsthan

Jnyana Dasohi, Anna Dasohi, Vidya Bhandari Param Poojya Dr. Sharnbaswappa Appaji with Dasoha Mahamane Annapurne Swaroopi Poojya Matoshree Dr. Dakshayini Avvaji

Parama Poojya Chiranjeevi Doddappa Appa

9th Mahadasoha Peethadhipati, Sharnbasveshwar Samsthan Trustee, Poojya Dr. Sharnbaswappa Appa Family Trust, Sharnbasveshwar Samsthan

I am truly delighted to witness the Electrical and Electronics Engineering Department publishing its annual magazine, "Electro 2021," thanks to the dedicated and committed efforts of both faculty and students. This magazine serves as a reflection of the students' active involvement in various activities. I extend my heartfelt congratulations to the chairperson, faculty members, and students of the department for their creativity and enthusiasm in bringing this magazine to life. Wishing them continued success in all their future endeavors.

Dr. Lakshmi Patil Maka Dean Sharnbasva University, Kalaburagi

It is my honor to present our department's magazine, "Electro 2021." This publication aims to uncover the literary talents of both students and faculty while fostering leadership skills. I believe it will serve as an inspiration for aspiring poets and writers, guiding their creativity toward refined expression. I sincerely appreciate the editorial team for their dedication and hard work in bringing this magazine to life. My heartfelt gratitude goes to our dean for their unwavering support in making this publication possible. Lastly, I extend my thanks to all the authors who contributed their valuable articles.

Sushma Patil CHAIRPERSON

Vision

To endeavor for excellence in education and research to meet the requirement of industry and research in the field of Electrical and Electronics Engineering.

Mission

- 1 To provide knowledge based technical skills and produce women technocrats/women entrepreneur to meet the needs of electrical industries.
- 2 To enhance national capabilities in energy management excellence while promoting the exploration and adoption of Non-conventional energy sources.
- 3 To create research-oriented culture in which students acquire knowledge and learn to apply professionally with due consideration of ethical and economic issues.
- 4 To uphold accountability through self-evaluation and a commitment to continuous improvement, along with strong moral and ethical values and above all to be a good human being.

Program Educational Objectives:

- 1 Graduates are enabled to pursue advanced studies, engage in research and explore diverse career opportunities in industry and academia.
- 2 To empower graduates with a broad engineering knowledge that enables them to comprehend, analyze, innovate and design new electrical products, develop technical solutions for real world challenges and contribute effectively to societal needs.
- Graduates are prepared to instill a professional and ethical attitude, foster creativity, enhance effective communication and presentation skills and develop team work abilities.
- 4 Graduates are prepared to exhibit leadership qualities, social consciousness and ethical values for lifelong learning.

PSO Statement:

PSO-1 Apply fundamental principles of mathematics, science, and engineering to identify, analyze, design, and investigate complex problems related to electric circuits, analog and digital electronics, electrical and electronics measurements, control systems, electrical machines, power systems, renewable energy systems, and electric vehicles.

- **PSO-2:** Utilize advanced techniques and modern engineering hardware and software tools in electrical and electronics engineering to foster lifelong learning and effectively adapt to multidisciplinary environments.
- **PSO-3:** Assess electrical problems with an ethical perspective, taking into account societal and environmental implications, and communicate solutions clearly through both oral and written presentations.

Program Outcomes:

Engineering Graduates will be able to:

- 1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- 6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.

- 8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- 11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- 12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

EDITORIAL BOARD

Faculty Coordinator

Mrs.Savitri Medegar

Asst.Professor

Electrical and Electronics Department

Student Coordinator

Neha

Shailaja

Magazine Content

SL. NO	CONTENT				
1	Events Conducted in the Department				
2	Technical Article and Nontechnical Article by students and faculty				
3	Achievements of faculty and students in different field				
4	Placement Details				

Seminar on "What industry is expecting" by Mr.Madan Mohan Goud, CEO of Hyderabad Institute of Electrical Engineers(HIEE), Hyderabad on 12/11/2021 in Association with HIEE.

The session started with the introduction of the HIEE institute. Sir explained about future industry development trends to achieve more intelligent manufacturing process, internet of things, cloud computing and cognitive computing which leads to the implementation and operation of smart factories. Sir also explained about job opportunity for electrical students and how HIEE institute will prepare the students to get the job in industry.JobFair on 02/03/2021

Gave the brief information on

- More than 30 companies were participated in job fair. 1.
- 2. 1500 students were attened the job fair
- 3. 377 students shortlisted in job fair.
- 200 students selected in job fair in different companies. 4.

News Articles

ಉದ್ಯೋಗ ಯಶಸ್ವಿ ಜೀವನದ ಮೊದಲ ಹೆಜ್ಜೆ: ಕಿಶೋರ

ch: ಲಾಭದಾಯಕ ಉದ್ಯೋಗ ಬುವುದು ಎಲ್ಲದಕ್ಕೂ ಅಂತ್ಯವಲ್ಲ ಉದ್ಯೋಗ ಪಡೆಯುವುದು ಾಂದ್ಯೋಗ ಪಡೆಯುವುದು ಸ್ತ್ರಿ ವೃತ್ತಿಪರ ವೃತ್ತಿ ಜೀವನ ೯ಸುವ ಮೊದಲ ಹೆಚ್ಚೆ ಎಂದು ನಗರ ಪೊಲೀಸ್ ಆಯುಕ್ತ ಡಿ. ಕಿಶೋರ ಶಿ ಹೇಳಿದರು. ರವ ಶೆಕೆಗ

ಶಾಬು ಹೇಳದರು. ನಗರವ ಶರಣಬಸವ ವಿಶ್ವವಿದ್ಯಾಲಯ ಮಂಗಳವಾರ ಅಯೋಚಿಸಿದ್ದ ಉದ್ಯೋಗ ಮುಂಗಳವಾರ ಅಯೋಚಿಸಿದ್ದ ಉದ್ಯೋಗ ಮುಂಗಳವಾರ ಅಯೋಚಿಸಿದ್ದ ಉದ್ಯೋಗ ತಾವರು. ಉದ್ಯೋಗಾತಾಂಕ್ಷೆಗಳ ಉದ್ಯಪದಶ್ರೋದ್ಯೋಗಾತಾಂಕ್ಷೆಗಳ ಹಿಂದುರಿಂದ ಉದ್ಯಪದಶ್ರೋದ್ಯೋಗವಣೆಯುವುದಕ್ಕೆ ಸಮುಖ್ ಸಿಬುತವಾಗಿರದಾರದು. ಅವಕಾಶ ಅಳವಡಿಸಿಕೆ. ಸಿಕ್ಕಾಗ ಉತ್ತಮ ಸಾಧನೆ ಮಾಡುವುದು ನೀಡಿರರು.

ಮತ್ತು ಉದ್ಯಮದ ಬಗ್ಗೆ ತಿಳಿದುಕೊಳ್ಳಬೇಕು. ಅಲ್ಲದೆ

ಕಲಬುರಗಿ: ಶರಣಬಸವ ವಿಶ್ವವಿದ್ಯಾಲಯದ ದೊಡ್ಡಪ್ಪ ಅಪ್ಪ ಸಭಾ ಮಂಟಪದಲ್ಲಿ ಮಂಗಳವಾರ ಆಯೋಜಿಸಿದ್ದ ಉದ್ಯೋಗ ಮೇಳದ ಮಂಟಪದಲ್ಲಿ ಪೋಸ್ಪರ್ ನ್ನು ಡಿಸಿಪಿ ಕಿಶೋರ್ ಬಾಬು ಬಿಡುಗಡೆಗೊಳಿಸಿದೆರು.

ಸಹೋದ್ಯೋಗಿಗಳು ಮತ್ತು ವೃತ್ತಿಯಲ್ಲಿ ಅಮೋಘವಾಗಿತ್ತು ಎಂದರು. ಹಿರಿಯರಿಂದ ಗೌರವ ಪಡೆಯಲು ಉದ್ಯೋಗ ಮೇಳದಲ್ಲಿ

ಬಂದ ಪ್ರತಿಕ್ರಿಯೆ ಮತ್ತು ಉದ್ಯೋಗ ಕಂಪನಿಗಳು ತೋರಿಸಿದ ಉತ್ಸಾಹ

ಮೇಕ-2021' ಉದ್ಯಾಗತಾಂತ್ರಿಕೆ ಸೋದ್ಯೋಗಿಗಳು ಮತ್ತು ಸೃತ್ತಿಯಲ್ಲಿ ಅಮೇಘವಾಗಿತ್ತು ಎಂದರು. ಅವರು, ಉದ್ಯೋಗತಾಂತ್ರಿಕೆ ಸೋದ್ಯೋಗಿಗಳು ಮತ್ತು ಸೃತ್ತಿಯಲ್ಲಿ ಅಮೇಘವಾಗಿತ್ತು ಎಂದರು. ಉದ್ದವದಲ್ಲಿಉದ್ದಮದೆಯುವುದಕ್ಕೆ ಪ್ರಮುಖ ಸೃತ್ತಿವರ ಮೌಲ್ಯಗಳು, ಹೆಚ್ಚು ಕಂಪಗಿಗಳು ಭಾಗಸಹಿಸುತ್ತಿದ್ದು, ಸಿಮಿಕವಾಗಿರುವರು, ಆವರ್ತಾ ಅಸವಡಿಸಿಕೊಳ್ಳಬೇಕೆಂದು ಸಂಹ ಸುತ್ತದು ಮುಖ್ಯ ಎಂದರು. ಇದ್ರ ಜೀವನದಲ್ಲಿ ಬಂಕ್ರತ ಹೊರ್ ಸುತ್ತದು ಮುಖ್ಯ ಎಂದರು. ಇದ್ರ ಜೀವನದಲ್ಲಿ ಉತ್ತತ ಹುದ್ದೆ ಸುತ್ತದು ಸಮತ್ತು ಎಂದರು. ಇದ್ರ ಜೀವನದಲ್ಲಿ ಉತ್ತತ ಹುದ್ದೆ ಸುವೇಶುಗಳು ಎಂದರು. ಬಾರ್ ಹುರಿ ಬಾರ್ಗೆಡೊಂದಿಗೆ ಪಡೆಸಲಾಗಿತ್ತು ಎಂದರು ಬಾರದ ಜಾರ್ಕಾಗಳು ತೋಲಸದ ಉತ್ಸಾಹ ಪ್ರೇತಾ ಮಾಟೀಲ, ಎಂದರು ಸುವೇಶ ಸಾಬರಿದ್ದರು. ಶ್ವೇತಾ ಮಡಿವಾಳ ಹಾಜರಿದ್ದರು.

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Sharnbasva hosts mega job fair in dist

EXPRESS NEWS SERVICE Kalaburag

JOB aspirants in large num-bers turned up at the Mega Job Fair organised by Sharnbasva University here on Tuesday. This is the second such initia-tive by the university which had previously organised the event in neighbouring Bidar. Addressing the gathering DCP Kishor Babu who inaugu-rated the fair said, "Participat-ing in the job fair within the campus and landing jobs in re-puted company or industry is itself an exhilarating experience."

xperience." "It exhibits the quality of ompetence among the aspir-nts. Getting a lucrative pay is of the end of everything, but is only the first step to build successful career," he added.

DCP Kishor Babu inaugurating the Job Fair organised by Sharnbasva University in Kalaburagi on Tuesday | expects

He further said that if one has to reach great heights in his or her career, they should be abreast of latest happenings and informed. Apart from this, one should also build core pro-fessional values to gain respect from their colleagues and sen-

iors in the realm. Sharnbas-weshwar Vidya Vardhak Sang-ha secretary Basavaraj Deshmukh said, "This is the second job fair conducted by the University. The first one was conducted a few days ago in Bidar in association with

the district administration and the response from the stu-dents and companies was tre-mendous. Conducting such fairs during the pandemic is not only unique, but it also helps the job aspirants to take a step forward in their career."

A step for aspirants to take a step forward in their career." University vice-chancellor Dr Niranjan V Nisty said, "More than 30 companies are participating in the job fair in which more than 1,500 stu-dents have registered their names. This will help the com-panies to fill up vacancies that were created during the andemic." Registrar Dr Anilkumar Bidve, Registrar (Evaluation) Dr Lingaraj Shastri, Dean Dr Lakshmi Patil Maka, Prof Uma Patil and others were present.

One day workshop on "Energy Conservation and Energy Efficiency" by Dr. SangmeshSakri, associate Professor PDA Engineering College Kalburgi on 29/12/2020.

The technical session started with the overview of the energy sector and Energy scenario in India, where Dr.SangmeshSakri pointed out that - India has less than 1% of world oil & gas reserves and 17% of world population. He remarked that heavy dependence on imported energy (80% of oil, 15 to 20% of coal and Gas), poses serious questions about energy security and balance of payment. To meet challenges of climate change and environmental pollution, improving energy efficiency is a cost effective solution.

He also discussed about importance of celebrating national energy conservation day. Significant roles of Indian citizen in energy security, power sector data, recent india's energy resource in india, sources for pollution, effects and solution, How to achieve energy conservation with energy efficiency, the energy pyramid, Energy efficiency benefits to industry, nation, globe. Energy conservation act, energy conservation tips, the plan of action, achievement in india.

Webinar on "Research Opportunities in Electrical Drives" by Dr. S. Rama Reddy , Former AE,TCE,Dean – EEERajalakshmi Engineering College, Chennai on 10/08/2020

This webinar explains the importance of research opportunities in electrical drive system. In this session firstly sir explained details about the why we need to go for research and later sir explained various opportunities under electrical drive systems. Electrical drives play an important role in a large number of industrial applications, electrical vehicles, elevators and robotics.

TECHNICAL ARTICLE

IoT in Electrical Engineering – Applications in monitoring and automation.

The Internet of Things (IoT) is transforming electrical engineering by enabling smart monitoring and automation across various domains, including power systems, industrial automation, and smart grids. IoT integration enhances efficiency, reduces downtime, and improves predictive maintenance through real-time data collection and analysis. This article explores key applications of IoT in electrical engineering and its impact on modern infrastructure.

One of the most significant applications of IoT in electrical engineering is smart grid management. IoT-enabled smart grids utilize real-time data from sensors and smart meters to optimize electricity distribution, balance loads, and detect faults before they escalate. By leveraging IoT, utilities can enhance power reliability and minimize transmission losses.

In industrial automation, IoT-driven systems provide predictive maintenance and real-time condition monitoring of electrical machinery. Sensors collect data on parameters such as temperature, vibration, and energy consumption, allowing engineers to detect anomalies and schedule maintenance before failures occur. This approach reduces downtime and extends equipment lifespan, improving operational efficiency.

Another crucial area is building energy management systems (BEMS), where IoT devices monitor lighting, HVAC systems, and electrical loads to optimize energy consumption. Smart sensors and AI-driven algorithms adjust power usage based on occupancy and demand, significantly reducing energy waste and operational costs in residential and commercial buildings.

IoT also plays a vital role in renewable energy integration, ensuring efficient monitoring and control of solar panels and wind turbines. By providing real-time insights into energy generation, weather conditions, and grid demand, IoT enhances the efficiency and stability of renewable power sources. Additionally, automated demand-response systems use IoT to dynamically adjust energy consumption in response to supply fluctuations.

Despite its benefits, IoT in electrical engineering faces challenges such as cyber security risks, data privacy concerns, and interoperability issues among different IoT devices and platforms. Addressing these challenges requires robust encryption, secure communication protocols, and standardized frameworks for seamless integration.

By Prof.Ashwini Asst.Professor

Advancements in Agriculture in India: Towards a Technological Transformation

Agriculture in India, the backbone of the rural economy, has undergone a significant transformation in recent decades. From traditional practices to the adoption of smart technologies and precision farming, Indian agriculture is evolving to meet the growing demands of food security, sustainability, and climate resilience. This article presents the recent advancements in Indian agriculture, the role of technology, government initiatives, and the road ahead toward a digital and sustainable farming future.

India ranks among the world's top producers of several crops, yet the agricultural sector faces challenges such as **land degradation, water scarcity, low productivity**, and **climate change impacts**. With over **55% of the population dependent on agriculture**, improving efficiency and sustainability has become a national priority. Technological interventions, policy reforms, and digitization are key drivers of modern agricultural development in the country.

Key Technological Advancements

Precision Agriculture

Use of **GPS**, **GIS**, **drones**, **and IoT-based sensors** for real-time data collection helps farmers monitor soil health, moisture levels, and crop conditions to optimize inputs like water and fertilizer.

Example: Punjab and Haryana are promoting precision farming through smart irrigation and drone spraying.

Smart Irrigation Systems

Traditional irrigation methods result in excessive water use. Technologies like **drip** and sprinkler irrigation, integrated with soil moisture sensors, help in water conservation.

Impact: Drip irrigation reduces water usage by up to 50% and increases yield by 20–30%.

Use of Artificial Intelligence (AI) and Machine Learning

AI-powered platforms predict weather, pest outbreaks, and crop diseases. Startups like **CropIn**, **Ninjacart**, and **Fasal** offer AI-driven insights for better decision-making.

Use case: AI-enabled pest detection systems reduce pesticide usage and protect crop health.

Drones and Satellite Monitoring

Drones are now used for aerial surveillance, pesticide spraying, and yield estimation. ISRO's satellite data supports National Agricultural Drought Assessment and Monitoring System (NADAMS).

Digital Agriculture Platforms

Mobile applications like **KisanSuvidha**, **eNAM**, and **AgriApp** provide weather forecasts, mandi prices, expert advice, and market connectivity directly to farmers' phones.

Government Initiatives Driving Innovation

1. Digital India and Agri-Tech Push

Under the **Digital India** mission, platforms like **Digital Agriculture Mission** (2021–2025) aim to integrate AI, ML, and blockchain into agricultural operations.

- PM-KISAN and Agri-Infra Fund Schemes such as PM-KISAN, Soil Health Cards, and Agri-Infra Fund have empowered farmers through financial support and infrastructure development.
- 3. **National e-Governance Plan in Agriculture (NeGP-A)** This initiative provides ICT-based services for farmers across the agricultural value chain.

Role of Startups and Private Sector

Agri-tech startups are transforming rural landscapes. Key players include:

- **DeHaat** Full-stack services from seed to market.
- **Bijak** B2B marketplace for agri-traders.
- AgNext Uses AI for quality assessment.
- EM3 Agri Services Farm equipment rental on a pay-per-use basis.

Fact: India has over **1,300 AgriTechstartups**, with funding exceeding **\$500 million** in recent years.

Challenges Ahead

Despite progress, hurdles remain:

- Digital illiteracy among rural farmers
- Fragmented land holdings
- Low adoption of advanced technologies
- Inadequate infrastructure and supply chain systems

Bridging the **tech gap**, improving **last-mile connectivity**, and **training farmers** are crucial for inclusive growth.

Future Outlook

- Smart Farming Villages: Pilot projects for fully digitized villages.
- Blockchain in Supply Chain: Transparent tracking from farm to fork.
- Climate-Smart Agriculture: Adaptation techniques to withstand erratic weather.
- Hydroponics & Vertical Farming: Urban agriculture for food sustainability.

Electric Vehicles (EVs) and Energy Storage

The shift towards sustainable transportation is accelerating the adoption of electric vehicles powered by advanced battery technologies. Electrical engineers are playing a crucial role in designing efficient charging infrastructure, developing high-performance batteries with longer lifespans and faster charging capabilities, and optimizing power management systems for EVs. Additionally, advancements in energy storage technologies such as lithium-ion batteries, solid-state batteries, and supercapacitors are opening up new possibilities for grid-

scale energy storage and renewable energy integration.

5G and Beyond:

The rollout of 5G wireless technology promises ultra-fast data speeds, low latency, and increased connectivity for a wide range of applications, including augmented reality, virtual reality, autonomous vehicles, and smart cities. Electrical engineers are working on developing 5G infrastructure, antennas, and communication protocols to support the growing demand for high-bandwidth wireless connectivity. Looking ahead, research into beyond-5G (B5G) and 6G technologies is already underway, exploring even faster data rates, greater network capacity, and more reliable communication systems.

****Sustainable Energy Solutions**:**

With the increasing emphasis on sustainability and climate change mitigation, there is a growing focus on renewable energy sources such as solar, wind, and hydropower. Electrical engineers are involved in the design, optimization, and integration of renewable energy systems into existing power grids, as well as the development of innovative energy harvesting technologies and energy-efficient devices.

In conclusion, the field of electrical engineering is witnessing rapid advancements driven by emerging technologies and societal needs. Engineers are embracing these trends to create solutions that are smarter, more efficient, and more sustainable, paving the way for a future powered by innovation.

"Sustainable Tech: Innovations Shaping a Greener Future"

Neha Nandargi (Batch: 2018 - 2022)

In our rapidly changing world, technology is not just about making our lives easier; it's also about making our planet healthier. Sustainable technology innovations are at the forefront of this movement, offering solutions to some of our most pressing environmental challenges. Let's explore how these innovations are shaping a greener and more sustainable future.

1. Renewable Energy Sources:

One of the most impactful areas of sustainable technology is the development of renewable energy sources. Solar panels, wind turbines, and hydropower are becoming more efficient and accessible, providing clean and renewable alternatives to traditional fossil fuels. These innovations not only reduce our carbon footprint but also pave the way for a more sustainable energy future.

2. Eco-Friendly Gadgets:

As technology evolves, so does the way we design and produce electronic devices. Companies are increasingly focusing on creating eco-friendly gadgets with reduced environmental impact. This includes using recycled materials, designing products for easy recycling, and minimizing energy consumption during production and use.

3. Green Transportation Solutions:

The transportation sector is a significant contributor to carbon emissions. Sustainable technology is revolutionizing the way we move, with electric vehicles (EVs) leading the charge. From electric cars to e-bikes, these innovations are helping to reduce air pollution and dependence on non-renewable resources.

Nontechnical Article

Does Social Media Do More Harm Than Good?

In a world where a single post can go viral in minutes, social media has become a powerful force shaping how we communicate, learn, and live. But with its rising influence, a debate continues: **Does social media do more harm than good**?

The Good Side of Social Media

Social media has transformed the way we connect. Friends and families stay in touch across borders. People find communities based on shared interests, and students access valuable information, tutorials, and career opportunities.

Positive impacts include:

- **Instant communication** and global connection
- Educational resources like YouTube lessons and academic pages
- Platforms for talent, art, and entrepreneurship
- Raising awareness on social issues and mobilizing support
- Mental health support groups and motivational content

The Dark Side of Social Media

While social media offers many benefits, its excessive use can lead to serious problems.

Negative effects include:

- Mental health issues like anxiety, depression, and low self-esteem
- Addiction and reduced productivity
- Cyberbullying, trolling, and online harassment
- Spread of **misinformation and fake news**
- Promotes a culture of **comparison and unrealistic standards**

So, Does It Do More Harm Than Good?

It all comes down to **how** we use social media.

- **Mindful usage** can make it a helpful tool.
- **Excessive or negative usage** can turn it harmful.
- **Digital literacy**, especially among students, is crucial to understand what to believe and how to behave online.

Social media is not inherently good or bad — it's a mirror of how we choose to use it.

Social media is a double-edged sword. It can **connect or divide**, **empower or exhaust**, **inform or mislead**. The key is to stay aware of its impact and use it as a **tool**, not a **trap**. As students and future leaders, we must ask ourselves: **Are we controlling our screens, or are they controlling us?**

The Importance of Mental Health Among Students: A Growing Academic Concern

Mental health plays a critical role in the academic success, social functioning, and overall well-being of students. With increasing academic pressures, digital distractions, and social expectations, mental health issues such as stress, anxiety, and depression are becoming more prevalent among student populations. This article explores the significance of mental health in students, key contributing factors, and strategies for prevention and intervention through institutional and personal support systems.

Mental health is defined by the World Health Organization as a state of well-being in which individuals realize their abilities, cope with normal life stresses, and contribute productively to their community. Among students, mental health affects **concentration, academic**

Rising Mental Health Issues in Student Populations

According to various global studies and national surveys:

- Nearly 1 in 4 students report experiencing mental health disorders.
 - Common conditions include:
 - Anxiety Disorders
 - **Depression**
 - **o** Burnout and Academic Stress
 - Sleep Disorders

Causes of Mental Health Challenges among Students

- Academic Pressure: High expectations, competitive environments, and examination stress.
- Digital Overload: Excessive screen time, social media comparison, and digital addiction.
- Isolation and Loneliness: Especially among students living away from home or in new environments.
- Financial Burdens: Tuition fees, living expenses, and part-time job responsibilities.
- Lack of Support Systems: Minimal access to counseling services and low mental health literacy.

Impact on Learning and Development

- Cognitive Impairment: Reduced memory, focus, and decision-making abilities.
- **Physical Health Decline:** Headaches, fatigue, and insomnia.
- Behavioral Changes: Withdrawal, aggression, or disengagement.
- Academic Underperformance: Missed deadlines, low grades, or dropouts.

The Role of Educational Institutions

- Mental Health Policies: Implementing campus-wide mental health frameworks and wellness policies.
- Counseling Services: Accessible and confidential mental health support centers on campus.
- Faculty Training: Training faculty to identify early warning signs of distress.
- Peer Support Programs: Mental health clubs, student-led help groups, and mentorship initiatives.

Technological and Preventive Interventions

- Mobile Apps: Tools like Headspace, Calm, or student wellness apps.
- **Online Counseling:**Teletherapy and virtual consultations.
- AI Chatbots: Early diagnosis tools using AI and machine learning.
- **Digital Detox Campaigns:** Promoting healthier tech usage patterns.

Recommendations for Students

- Practice regular physical activity and mindfulness.
- Maintain a healthy sleep routine.
- Limit screen time and social media use.
- Seek help early from peers, counselors, or professionals.
- Build **supportive social connections** and talk about your feelings.

Mental health is not a luxury but a **necessity** for student success. As educational institutions become more academically demanding, it's essential to prioritize mental well-being with the same intensity as physical health and academics. Early intervention, awareness, and supportive environments can foster healthier, happier, and more productive students.

By : Rakshita (SW18EE024)

College Life: Expectations vs Reality

College – a word that sparks excitement, dreams, and endless expectations. For most students, it's seen as a magical place full of freedom, friendship, and fun. But as soon as you step in, reality knocks. Let's explore the journey of college life by comparing our dreamy expectations with what really happens!

Expectation: Freedom at Last!

"No more uniforms, no more rules!"

Reality:

You do get freedom... along with assignments, attendance issues, and project deadlines that never seem to end!

Image idea:

- Left: Student dancing happily outside a school gate
- Right: Same student buried in books and project files

Expectation: Easy-Breezy Academics

"College will be chill, right?"

Reality:

Say hello to back-to-back lectures, surprise tests, and lab records. It's not as chill as it looks on TV!

Image idea:

- Left: Student dreaming in class, headphones on
- Right: Student panicking during exam week with coffee and notes everywhere

Expectation: Best Friends Forever!

"I'll find my squad and we'll be inseparable!"

Reality:

You'll meet amazing people, but forming strong bonds takes time. Also, group projects can test even the strongest friendships.

Image idea:

- Left: Group of smiling students taking selfies
- Right: Group frustrated during a last-minute group project meeting

Expectation: I'll Manage My Expenses Easily

"Pocket money will be more than enough."

Reality:

Every pizza, extra printout, or trip to the canteen adds up. And suddenly, you're broke by the 15th of the month.

Image idea:

- Left: Student holding wallet full of cash
- Right: Same student showing empty wallet with sad face

Expectation: Hostel Life Will Be a Party

"Midnight movies, gossip sessions, and freedom!"

Reality:

Yes, it's fun — but also loud roommates, shared bathrooms, and homesickness. Not to mention late-night hunger struggles!

□ Image idea:

- Left: Friends having a pillow fight in hostel
- Right: One student eating instant noodles alone at 2 AM

Expectation: Perfect Time Management

"I'll attend classes, hit the gym, join clubs, and chill with friends."

Reality:

Most days, just getting out of bed on time feels like an achievement. Balancing everything is an art few master.

□ Image idea:

- Left: Organized timetable with goals
- Right: Student sleeping next to laptop with assignments still open

By Bhagyashree SW18EEE005

Gender Equality Starts with Us: A Crucial Step Towards a Balanced Future

Gender equality is not just a social or political issue, but an essential element for economic growth, sustainable development, and the well-being of societies. Achieving gender equality requires addressing systemic imbalances in opportunities, rights, and representation. In educational institutions, workplaces, and communities, ensuring equal treatment and access to resources is vital for fostering a more inclusive and productive environment. This article explores the importance of gender equality, the current challenges, and the steps necessary to create a more equitable world, starting with us.

Introduction

Gender equality is defined by the United Nations as the state where individuals, regardless of gender, have equal rights, responsibilities, and opportunities. Although significant progress has been made in many parts of the world, inequality remains widespread, particularly in education, employment, political participation, and access to resources. The fight for gender equality is not only about benefiting women but also about creating a just society where every individual can thrive based on merit and capabilities, free from gender bias.

The Current State of Gender Inequality

Despite decades of advocacy, gender inequality persists across various dimensions:

Education

While global literacy rates have improved, **gender disparities** remain in many developing regions. According to UNESCO, girls in rural and conflict-affected areas have significantly lower rates of school attendance, particularly in secondary education.

Workplace Representation

The gender pay gap remains a major issue globally. According to the World Economic Forum, women earn approximately **20% less than men** globally. Additionally, women are underrepresented in **STEM fields** (Science, Technology, Engineering, and Mathematics), political offices, and corporate leadership roles.

Violence and Safety

Gender-based violence, including harassment, domestic violence, and sexual assault, disproportionately affects women and girls worldwide. The **UN Women** report highlights that one in three women will experience physical or sexual violence in her lifetime.

Why Gender Equality Matters

Economic Growth

Promoting gender equality is crucial for sustainable economic development. According to McKinsey, **advancing gender equality could add \$12 trillion to global GDP** by 2025. Gender-diverse teams perform better, foster innovation, and drive productivity.

Social Stability

Gender equality fosters greater social stability and harmony. A society where people are treated equally promotes **trust**, **cooperation**, **and mutual respect**, essential for peaceful cohabitation.

Human Rights

Gender equality is a fundamental human right. Every individual, regardless of their gender, deserves access to education, healthcare, and the ability to pursue opportunities without facing discrimination or barriers.

Steps Towards Achieving Gender Equality

Inclusive Policies and Laws

Governments and organizations must create and implement **policies** that promote gender parity, from equal pay for equal work to measures preventing harassment and discrimination. For instance, **affirmative action** and **gender quotas** can help balance representation in leadership positions.

Awareness and Education

Public education and awareness campaigns play a vital role in eliminating stereotypes and changing societal norms that perpetuate gender inequality. Schools, workplaces, and communities must emphasize the importance of respect, equity, and equal opportunities.

Empowering Women and Girls

Support for women's leadership, entrepreneurship, and access to decision-making positions is crucial. Programs that promote girls' education, access to technology, and mentorship can break down barriers and pave the way for future generations.

Men as Allies

Achieving gender equality requires the participation of everyone, including men. Men need to be allies in the struggle, advocating for equal rights and opportunities while also rethinking traditional gender norms.

The Role of Technology in Advancing Gender Equality

Technological advancements present unique opportunities to bridge gender gaps. Digital tools can **empower women** by providing access to online education, creating job opportunities in the digital economy, and facilitating platforms for advocacy and networking. However, the **digital gender divide** also needs addressing. Women in rural areas or low-income countries often lack access to the internet and digital literacy programs. Governments and organizations must focus on improving **technology access** and education for women.

By YESHODA SW19EEE025

STAFFS ACHIEVEMNETS

Award received by staff

Year of Award	Title of the innovation	Name of the Awardee	Name of the Awarding Agency with contact details	Category- institution/teacher/rese arch scholar/student
			Novel Research	
2021	Best Research	MrsGeeta K	Academy	Teacher

Paper published by staff

Title of Paper	Name of The Author/S	Name of Journal	Year of Publication
A Nine -Level Switched Capacitor Type Inverter with Boosting Ability	Sushma J Patil	Turkish Journal of Electrical Engineering & Computer Sciences	2021
Tumor Segmentation using Optimize Evidential C- Means at Brain MRI Images	Dr. M. Sasikala	International Journal of Innovative Technology and Exploring Engineering (IJITEE)	2021
Survey on Traffic Assessment Using Image Processing and Fuzzy Logic	Dr. M. Sasikala	Journal of Emerging Technologies and Innovative Research (JETIR	2021
Fuzzy -PI controlled cascade H-Bridge Inverter Fed Single Phase Induction Motor Drive	Sushma J Patil	International Journal Of scientific and Technology Research volume 9, Issue 4	2021
A Switched Capacitor Multilevel Inverter with Voltage Boosting Ability	Sushma J Patil	IEEE Distributed Computing,VLSI, Electrical Circuits and Robotics(DISCO VER) 978-1- 7281-9885- 9/20/\$31.00 2020IEEE	2021
Proportional Resonant Controller For Semi Converter Three Phase VSI Fed Induction Motor Drive to Enhance Time Response	Geeta K	International Conference on Power Electronics &IoT Applications in Renewable Energy and Its Control	2021

Patent published by staff

Name of the Teacher	Patent Number	Title of the patent	Year of Award / publish of patent
Prof.Geeta	202141007828	Generation of E-bill transaction number using Block Chain	5/3/2021
Prof.Soumya	202131011450	Artificial intelligence based smart detection of lung disease from chest	9/4/2021

STUDENTS ACHIEVEMNETS CONGRATULATIONS

SL NO	Name of the student	Name of the event	Date/Year of the event	Team / Individual	inter- University	Position secured	Name of the Organising Institution
1	Priya and Team	Project	2021	Team	Outside the university	Selected	GSSS INSTITUTE OF ENGINEERING & TECHNOLOGY
2	Priya and Team	Project	2021	Team	Outside the university	selected in KSCST	KSCST
3	Deepika S Patil	Corona- Warrior quiz	15/05/2020	Individual	Inter University	Participate d	Sharnbasva University klb

TOPPERS

SEM	STUDENT NAME	USN	CGPA	PLACE
	Geetashree	SW20EE008	9.86	1 st
Ι	Bhavani	SW20EE007	9.84	2 nd
	Ambika	SW20EE002	9.82	3 rd
	Pooja Surwase	SW19EE019	9.95	1 st
	Daneshwari	SW19EE008	9.88	2 nd
	Deepika	SW19EE009	9.88	2 nd
II	Vanishree	SW19EE027	9.88	2 nd
	Shista Tahseen	SW19EE021	9.88	2 nd
	Yashoda	SW19EE029	9.88	2 nd
	Sufiya Begum	SW19EE025	9.81	3 rd
	Chitra	SW18EE006	10	1 st
	Jahan A R A	SW18EE008	10	1 st
III	Neha Nandargi	SW18EE013	10	1 st
	Bhagyashree	SW18EE005	9.94	2 nd
	Sharada	SW18EE031	9.9	3 rd

MOUs are signed to get benefits of skill development, certified courses, outcome-based training, placement and related service.

- Hyderabad Institute of Electrical Engineers (HIEE)
- ✤ Government Tools and Training Centre (GTTC)
- SKILLABLERS Technologies Private Limited

