

INDUSTRY 4.0

ACADEMIC YEAR
2021-22

MAGIC CIRCUITS

DEPARTMENT OF ELECTRONICS AND ENGINEERING
SRI SAIRAM COLLEGE OF ENGINEERING

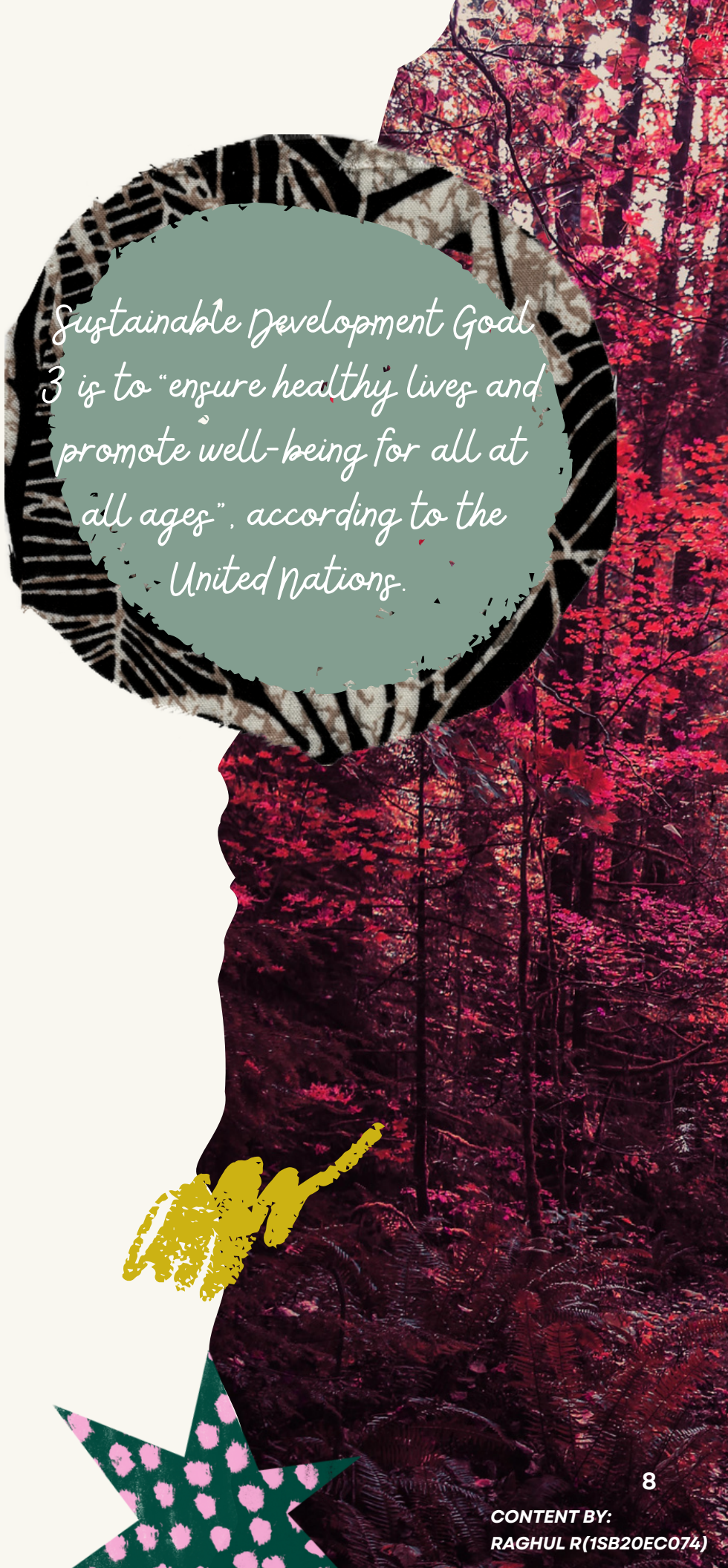


STAFF COORDINATORS:
1. HEMA SUBHRAJA J|AP|ECE
2. MOHANTHI KAKARLA K|AP|ECE|

STUDENT COORDINATORS:
1. RAGHUL R(1SB21EC074)
2. ANUSPA BARDHAN(1SB21EC005)



Over the last few years, life expectancy has declined globally, with the pandemic causing untold damage to health systems and populations, especially for the poorest and for women and children. The World is committed to restoring essential health services to pre-pandemic levels by the end of 2025, by strengthening health systems and investing in health workers, as an essential step toward achieving universal health coverage and renewing progress on the SDGs. The Goal addresses all major health priorities, including reproductive, maternal and child health; communicable, non-communicable and environmental diseases; universal health coverage; and access for all to safe, effective, quality and affordable medicines and vaccines. It also calls for more research and development, increased health financing, and strengthened capacity of all countries in health risk reduction and management. Studying disease epidemiology, by enabling increased use of spatial analysis to identify the ecological, environmental and other factors that contribute to the spread of vector-borne diseases, monitoring disease patterns and defining areas that require disease-control planning



Sustainable Development Goal 3 is to "ensure healthy lives and promote well-being for all at all ages", according to the United Nations.

E SIM-EMBEDDED SUBSCRIBER IDENTITY MODULE

I have a SIM card ejector tool everywhere I go. It's probably not a normal thing to have, but as a guy who's moving between phones often, I kind of have to have one.

If you are planning an international trip, this news is for you. You will no longer need to spend extra bucks on international roaming charges. As per the reports, Sensorise, an M2M service provider, has introduced India's first-ever inaugural consumer travel eSIM, offering worldwide connectivity. Designed to cater to leisure travellers, corporate travellers, and students, this eSIM presents an affordable substitute for conventional international roaming telecom solutions. Available for less than \$10, the eSIM will be accessible in more than 190 countries through Sensorise mobile app, which offers a selection of more than 1,000 customizable plans and will offer the most comprehensive global coverage for eSIM data plans.

SIMs are a type of messages issued from storage systems. You can configure when and how the SIMs (Service Information Message) are generated, and the notification methods. Message types. Actions to take when a SIM is output.

Designed initially to access mobile phone networks, a SIM card authenticates the subscriber and ensures the user is accurately billed for used airtime. The SIM also stores your phone directories, messages, information on roaming across different networks, and many other value-added voice and data services.

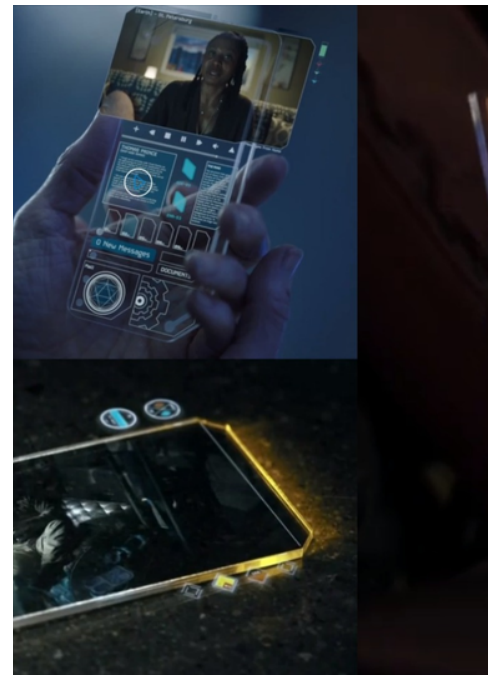


SMART PHONES



Smartphones have come a long way since their inception. In today's fast-paced world, these pocket-sized devices have become an integral part of our lives. Let's take a look at the current landscape of smartphones.

1. Display Technology:
2. 5G Connectivity
3. Camera Innovations
4. Processing Power
5. Operating Systems
6. Security
7. Battery Life
8. Privacy



Role of smartphone in student life

Smartphones play a significant role in students' lives by providing easy access to information, communication, and productivity tools. They serve as educational resources, allowing students to access digital textbooks, research materials, and educational apps. Additionally, smartphones facilitate communication with peers and teachers, assist in time management, and provide entertainment and relaxation. However, it's essential for students to use smartphones responsibly to balance their academic and personal lives effectively.

METAVVERSE



INTERESTING FACTS ABOUT ELECTRONICS AND COMMUNICATION ENGINEERING

JONATHAN PATTERSON

"Resist the Urge to Resistors."

ECE is an engineering branch that includes the production, design, research and testing of electronic devices and technology issues related to telecommunications systems, electronics, computers and related industrial sectors. ECE course is popular amongst candidates who wish to enter into the field of telecommunications, manufacturing, and production of communications and satellite systems. The course offers promising career opportunities across various private and government manufacturing and production units. It is a popular branch of engineering offered by most engineering colleges.

Electronics and Communications Engineering (ECE Engineering) involves researching, designing, developing, and testing electronic equipment used in various systems. It also deals with the manufacturing of electronic devices, circuits, and communications equipment. In India, Electronics and Communications Engineering is offered by various colleges at the UG as well as PG level leading to BTech (4 years) and MTech (2 years) degrees respectively.

WHY WE FOOL OURSELVES

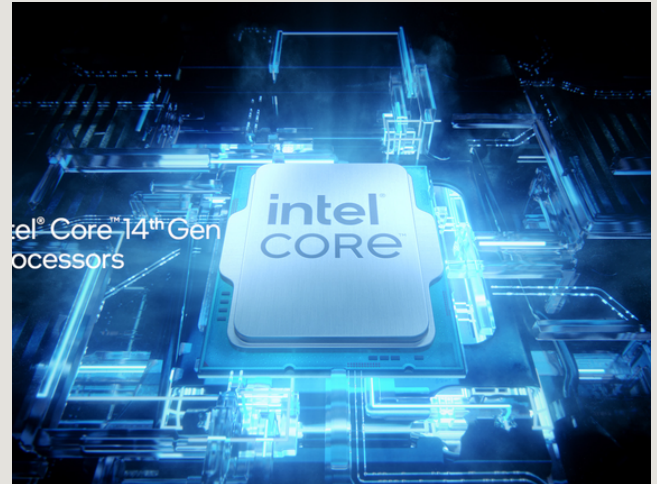


Let's accept it, all of us deceive ourselves. We lie to ourselves through our teeth. Our minds habitually distort (or ignore) critical information. We routinely engage in what we call wishful thinking, we bury our heads in the sand, and once in a while we never forget to drink our own Kool-Aid. If you don't believe me, tell me, why do smokers (but not non-smokers) choose not to hear the dangerous effects of smoking? Why do people systematically underestimate their risk of contracting COVID-19? And why do most people believe they are better drivers, leaders, managers than the average?

- Sigmund Freud believed self-deception is a (somewhat unconscious) coping strategy or a defence mechanism — a way for our ego to protect itself, and for us to preserve our self-esteem. We have a habit of repressing painful thoughts. (What's Freud's lifelong obsession with repressed feelings?)
- Remember Jack Nicholson's "You can't handle the truth!" from A Few Good Men? Yeah, Nicholson is our subconscious trying to save us from the truth. Our egos and self-esteem are fragile and need to be shielded from distressing information — like the fact that we didn't get promoted because we aren't good enough, and not because of favouritism. We are like that fox in Aesop's fable, and the grapes are sour when we can't have them.
- In conclusion, we humans must self-deceive. Those who refuse to play such mind games will be at a disadvantage. Thus, we are often wise to ignore seemingly critical information and to believe easily refuted falsehoods (think anti-vaxxers, far-right conservatives, and far-left liberals) — and then to prominently advertise our distorted thinking because these are winning moves. Evolutionarily speaking, the better we deceive ourselves, the better we deceive others.

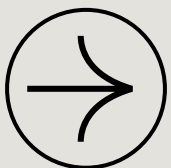
QUICK SILVER

HOUSES 24 CORES (EIGHT PERFORMANCE-CORES AND 16 EFFICIENT-CORES) WITH 32 THREADS, 150W PROCESSOR BASE POWER, 36MB INTEL SMART CACHE, AND A TOTAL OF 20 PCIE LANES (16 PCIE 5.0 AND FOUR PCIE 4.0 LANES)

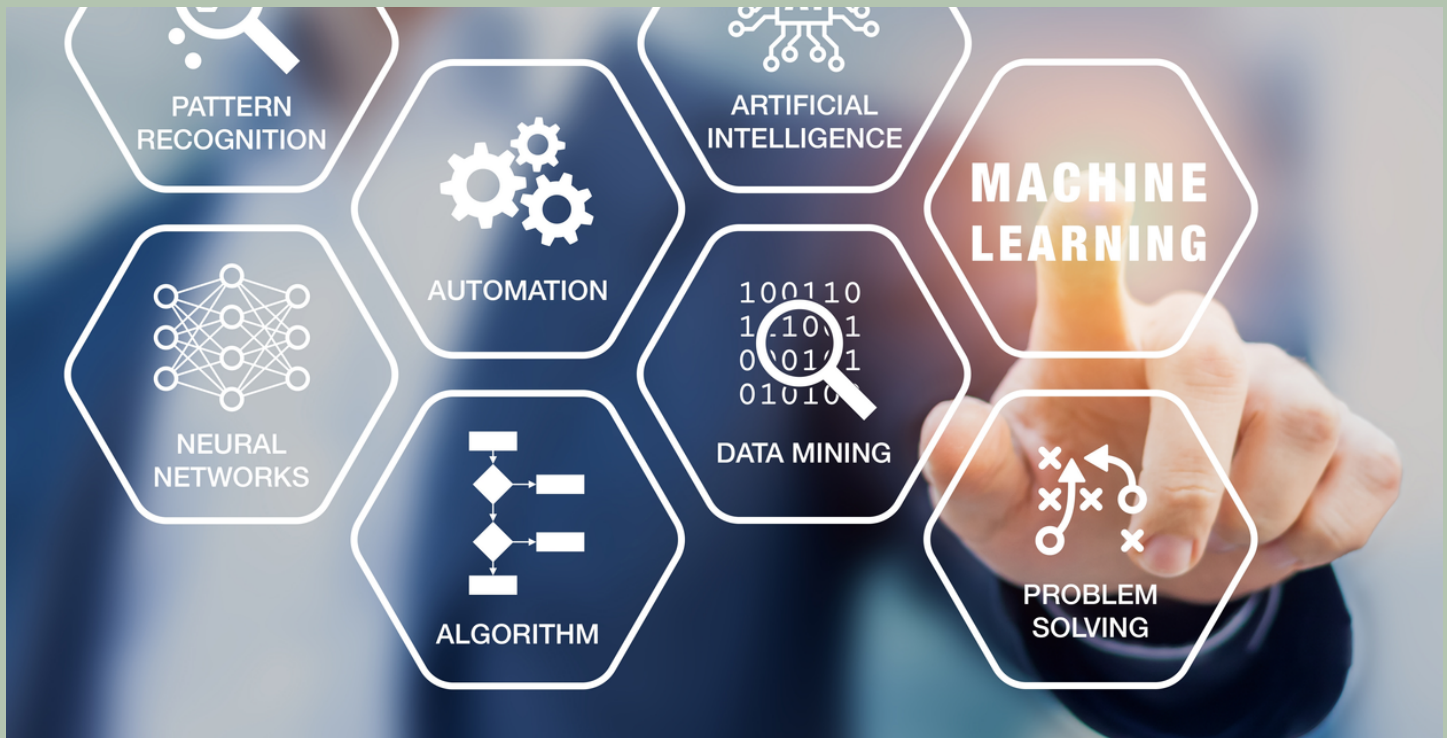


Intel's 13th Gen Core i9 13900KS series is the successor of the i9-13900K, which was launched in 2022.

Without overclocking, it promises to deliver up to 6.0 gigahertz (GHz) max turbo frequency out of the box, the first CPU to touch that threshold..



MACHINE LEARNING IN ECE



Big data, machine learning (ML) and artificial intelligence (AI) applications are revolutionizing the models, methods and practices of electrical and computer engineering. At the same time, electrical and computer engineering research advances in hardware and software are crucial for all those applications to become a reality. New technology domains, such as smart grids, smartphone platforms, autonomous vehicles and drones, energy efficient systems, wearables and Internet of Things (IoT) tools will unfold; embedded with electrical and computer engineering systems in real world or industry practice.

Many existing studies explored how to teach AI knowledge or concepts to university students. Few studies have been conducted to investigate the application of AI in early childhood (age 3–8 years old). However, more and more AI devices are appearing in children's lives, such as voice personal assistants, household robots, and networked smart toys (Williams et al., 2019). AI promotes the creation and effectiveness of systems, which are obviously very useful educational tools.

Digital technologies are increasingly being used for teaching and learning in the early years. Several review studies were conducted to study the relationship between digital technology and ECE from the perspectives of technology-enhanced environment, learning achievement, and other aspects. For example, investigated the use of touchscreen mobile devices in ECE. They revealed that the most common application of digital technology in ECE was the use of touchscreen mobile devices to assist young children in developing their language skills. This finding is also confirmed by a recent survey in Singapore showing that digital technology use would affect children's reading abilities in their early years argue that the integration of digital technologies into ECE also implies that children have varying opportunities to learn and explore digitally, which would lead to unequal educational outcomes. Therefore, it is necessary to promote all sorts of digital technologies in ECE to ensure an early start of equity and social justice in the human society. However, AI technologies have not been emphasized in the previous reviews in terms of linking technology to ECE.



Systems and Control Engineering: Mastering the Art of Innovation

: Systems and control engineering form the cornerstone of modern technological advancements, playing a pivotal role in managing intricate systems across diverse fields. This abstract explores the fundamental concepts and applications of this discipline, emphasizing its significance in our interconnected world. Systems engineering involves understanding and optimizing complex relationships within systems, while control engineering focuses on regulating dynamic behaviors. Together, they drive innovation in manufacturing, healthcare, transportation, renewable energy, and environmental monitoring. Despite challenges, such as unpredictable system behaviors, engineers continually refine their approaches, integrating emerging technologies like AI and quantum computing. This abstract underscores the vital role of systems and control engineering in shaping a more efficient, precise, and sustainable future, where adaptability and innovation are paramount.



Conclusion: Systems and control engineering are the unsung heroes behind the scenes, orchestrating the symphony of modern life. As our world becomes increasingly interconnected, the demand for skilled engineers versed in this field will only rise. Through ongoing research, innovation, and a deep understanding of complex systems, engineers will continue to shape a future where efficiency, precision, and sustainability go hand in hand. Systems and control engineering, with its ability to transform ideas into reality, stands at the forefront of the technological revolution, steering us toward a more advanced and interconnected future.

SKETCHES OF ECE

01



ART BY: DHANUSH KC {1SB21EC019}

02



ART BY: DHANUSH KC {1SB21EC019}

03



ART BY: SUSHMITHA MOHARE {1SB21EC403}

04



ART BY: MONIKA K {1SB21EC056}