DEPARTMENT OF ELECTRONICS AND COMMUNICATION

NEXUS

June 2023 Vol 14 , Issue 1

VISION

To be a pacesetter in the field of Electronics and Communication Engineering.

MISSION

To provide quality education for the students in the field of Electronics & Communication Engineering.

To educate students about professional and ethical responsibilities and train them to build life skills for their career development.

HOD'S DESK

PROF. DR. ANTO SAHAYA DHAS

Education is not an act of acquiring knowledge but learning a skill to lead life and forming one's personality. This is an ennobling process of growth. I can boldly say that we have excelled in every initiative that we undertook and we have stood together in facing the challenges in realizing quality education. Our department has been actively involved in various activities that have brought to light the hidden talents of our students and faculty. I am happy to note that our department is coming out with another new edition of our Newsletter "NEXUS".

The Newsletter is presenting a glimpse of the growth of the Department on many fronts. I congratulate the department for their commitment towards the provision of excellent all-round education for our students. I also wish them to move forward with confidence, pride and enthusiasm. As Sir Nelson Mandela said " Education is the most powerful weapon which you can use to change the world"

Prof. Dr. Anto Sahaya Dhas
Head of Department
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Vimal Jyothi Engineering College, Chemperi

THIS ISSUE:

STUDENT ARTICLE

Dishna Shareej
S4ECE

" SUICIDE AND YOUTH "

Is suicide a final solution for all your problems? If you think so just place your hand over your heart, can you feel it? That is called a purpose. You are alive for a reason. So don't ever give up...

Suicides among young people continue to be a serious problem. Suicide is the second leading cause of death for children, adolescents, and young adults age 15-to-24-year-olds. Most children and adolescents who attempt suicide have a significant mental health disorder, usually depression. Among younger children, suicide attempts are often impulsive. They may be associated with feelings of sadness, confusion, anger, or problems with attention and hyperactivity. Among teenagers, suicide attempts may be associated with feelings of stress, self-doubt, pressure to succeed, financial uncertainty, disappointment, and loss. For some teens, suicide may appear to be a solution to their problems. Depression and suicidal feelings are treatable mental disorders. The child or adolescent needs to have his or her illness recognized and diagnosed, and appropriately treated with a comprehensive treatment plan.The assessment of suicide risk factors should include a comprehensive psychiatric evaluation of the youth including collateral information from parents, other family members, teachers, caregivers, and friends. Psychopathology, substance misuse, and a history of suicide attempt are considered strongest predictors of future suicidal behaviours in youth. Major depressive disorder carries the greatest risk for suicide attempts and a higher severity of depressive symptoms is associated with a greater likelihood of attempting suicide. In numerous studies, a history of previous suicide attempt has been associated with increased future suicide attempts.A history of interpersonal violence or maltreatment increases the risk for completed suicide. Adolescents with a history of cyberbullying were more likely to report suicidal ideation compared to adolescents without any bullying experiences.A recently published study found that increased weekend screen time was associated with higher child-reported suicidality while increased parental supervision and positive school involvement were found to be associated with a decrease in child reported suicidality. Conflicts in families are also associated with an increase in the risk of suicidal behaviours in youth. Other risk factors include a history of adoption, male gender, and a history of physical or sexual abuse. The causes of suicide among youth are complex and involve many factors. Reducing risk factors and increasing protective factors and resilience is critical. Knowing the warning signs is also critical. Warning signs for those at risk of suicide include: talking about wanting to die, feeling hopeless, having no reason to live, feeling trapped or in unbearable pain, seeking revenge, and being a burden on others; looking for methods and making plans such as searching online or buying a gun; increasing use of alcohol or drugs; acting anxious or agitated; behaving recklessly; sleeping too little or too much; withdrawal or isolation; and displaying rage and extreme mood swings. The risk of suicide is greater if a behaviour is new or has increased and if it seems related to a painful event, loss, or change. . The participation, support, and active involvement of families, schools, and communities are essential. Youth focused suicide prevention strategies are available. Promotion and prevention services are also available to address mental health issues.mYouth suicide constitutes a major public mental health problem. Young people and adolescents are vulnerable by nature for mental health problems. While suicide is relatively rare in children, it is prevalence increases significantly throughout adolescence. The only way forward is to reduce these risk factors and strengthen protective factors. To increase successful attempts to address youth suicide in the future, further unrevealing of the complex suicide process must be accompanied by sustained efforts in underpinning and evaluating ongoing and new prevention strategy plans.

ALUMNI CORNER

Don Devasia

" THE ROLE OF ARTIFICIAL INTELLIGENCE IN BIOMEDICINE "

Artificial Intelligence (AI) has emerged as a powerful tool with the potential to revolutionize various fields, and biomedicine is no exception. The integration of AI technologies in biomedical research, diagnosis, and treatment holds tremendous promise for improving healthcare outcomes, enhancing efficiency, and advancing our understanding of complex diseases. This essay explores the key applications of AI in biomedicine and highlights the transformative impact it can have on the future of healthcare.

Data Analysis and Precision Medicine: One of the major challenges in biomedicine is the analysis of vast amounts of biomedical data. AI algorithms excel in handling and extracting valuable insights from complex datasets, such as genomics, proteomics, and electronic health records. By integrating AI with these data sources, researchers can identify patterns, predict disease risks, and personalize treatment strategies. Precision medicine, which aims to deliver tailored healthcare based on an individual's genetic makeup, is greatly facilitated by AI-driven data analysis, enabling the development of targeted therapies and more accurate diagnoses. **Medical Imaging and Diagnosis:** AI algorithms have demonstrated remarkable capabilities in medical imaging interpretation, enabling faster and more accurate diagnoses. Deep learning algorithms trained on large datasets can recognize patterns and anomalies in medical images, assisting radiologists in detecting and diagnosing diseases such as cancer, cardiovascular conditions, and neurological disorders. AI-powered diagnostic systems have the potential to reduce diagnostic errors, provide early detection, and improve patient outcomes.

Drug Discovery and Development: AI is transforming the traditional drug discovery process, which is time-consuming, expensive, and often leads to high failure rates. Machine learning algorithms can analyze vast chemical and biological datasets to identify potential drug candidates, predict their efficacy, and optimize drug design. AI-powered virtual screening methods can significantly accelerate the identification of promising drug candidates, potentially leading to faster development of novel therapeutics and personalized treatment options.

Clinical Decision Support Systems: In the complex landscape of healthcare, AI can support clinical decision-making by providing evidence-based recommendations and insights to healthcare professionals. By analyzing patient data, medical literature, and real-time clinical information, AI systems can assist in diagnosis, treatment selection, and monitoring of patient outcomes. These clinical decision support systems can enhance medical accuracy, reduce errors, and improve patient safety.

Patient Monitoring and Disease Management: AI-driven wearable devices and remote monitoring systems are empowering patients to actively participate in their healthcare management. These devices can continuously collect data, such as vital signs, activity levels, and sleep patterns, and provide real-time feedback and personalized recommendations. AI algorithms can analyze this data, detect abnormal patterns, and alert healthcare providers to potential health issues, enabling early intervention and preventive care. The convergence of AI and biomedicine holds tremendous potential to transform healthcare by revolutionizing data analysis, diagnosis, drug discovery, clinical decision-making, and patient management. AI-driven technologies have the ability to augment the capabilities of healthcare professionals, improve patient outcomes, and accelerate scientific discoveries. However, careful attention must be given to ethical considerations and the responsible implementation of AI to ensure patient privacy, transparency, and fairness. By leveraging the power of AI, we can unlock new frontiers in biomedicine and pave the way for a healthier and more efficient healthcare system

STUDENTS AND STAFF ACHIEVEMENTS

NPTEL COURSE COMPLETED

Congratulations to Mr Vinod J Thomas and Ms Anusha Chacko

1. Mr Vinod J Thomas completed the NPTEL course in signals and systems as National level topper with 92% marks
2. Ms Anusha Chacko Completed the NPTEL course in Programming language

PUBLICATION

1. M Grace John, S.Baskar. Extream learning machine algoritham based model for lung cancer classificatin from histopathological real-time images DOI : https://doi.org/10.1111/coin.12576 .

FDP

1. Dr. Roshini T V has participated in the 7 Day National Level Online Faculty Development Program on Outcome Based Education (OBE) organised by Nirmala College, Muvattupuzha in association with The Kerala State Higher Education Council from 10 May to 17 May 2023
2. All the Electronics and Communication Engineering Department Faculties were participated 30 hours Faculty Development Program on OBE Philosophy & Practice organized by the Internal Quality Assurance Cell, Vimal Jyothi Engineering College.
3. Ms Bindu Sebastian has participated in Five day FDP on Education 5.0 organized by the Department of Information Technology in Association Academic Staff College Dr. M.G.R Educational and Research Institute.

every artist dips his brush in his soul and paint his own nature into his paintings

-Henry Ward Beecher

ASTHRA 23

CHARITY PILGRIM

"You have not lived today until you have done something for someone who can never repay you."

— John Bunyan

S2 ECE Students visited " as part of Charity Pilgrim " on 29th April 2023

PTA MEETING OF S2 ECE

SIDHIMA SUJITH

PRIMAL ROSE

PREETH MARIYA

MOMENTS OF FAREWELL

""Don't be dismayed by good-byes. A farewell is necessary before you can meet again. And meeting again, after moments or lifetimes, is certain for those who are friends"

CONGRATULATIONS

Federal Bank

Melvin Joseph

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

1. Graduates will have successful career in the field of Electronics and Communication Engineering and allied sectors
2. Graduates will have the ability to pursue higher studies and research
3. Graduates will demonstrate entrepreneurial skills to develop innovative products and services
4. Graduates will adapt to different roles in global working environment by respecting diversity and professional ethics

EDITORIAL BOARD

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