the

HORIZON

DEAN'S DESK

Dear students, we at Grodno State Medical University strive to provide students with top-quality education, but that's not it. GRSMU is also a hub for Scientific, Cultural, and Sports related activities. We wholeheartedly acknowledge that International students are an integral part of our university, and we take immense pride in that. Grodno State Medical University is glad to work with students from different countries and provide them with a stage to represent their nation and culture.
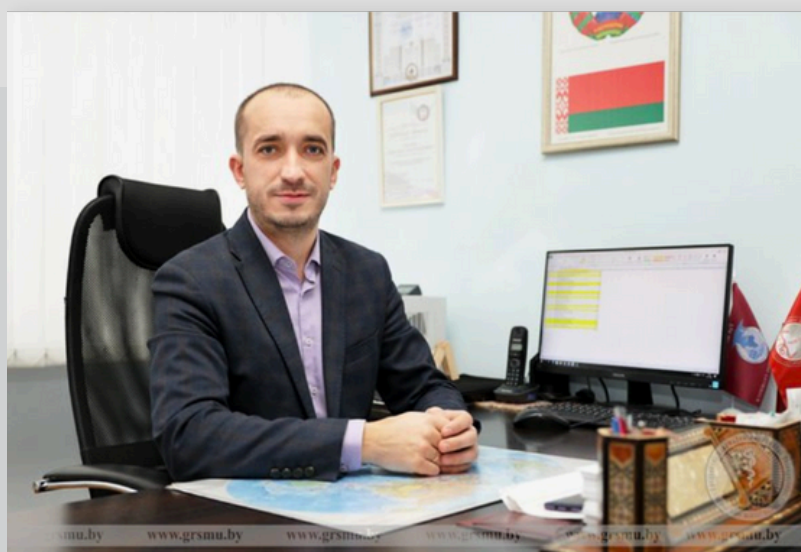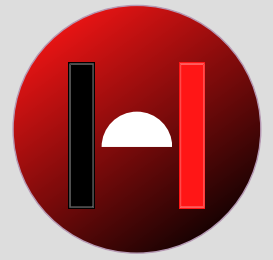

**DEAN OF FACULTY OF INTERNATIONAL STUDENTS
DR. ALEKSANDER ALEKSANDEROVICH STENKO**

GRSMU celebrates its uniqueness in diversity, for in its true essence our university is a junction where students from various backgrounds and cultures come together as one big family. GRSMU has always encouraged students to explore further and beyond in every field they try their hands at. I hope that you like the novel concept of 'The Horizon' - a magazine that serves as a platform for the students to voice their opinions, share their takes and present their points of view.

'**The Horizon**' is a medium of extended communication where we can learn a lot from one another.
I highly appreciate this initiative and personally support it. I look forward to reading the interesting blogs written by you.

WELCOME TO THE HORIZON

"We all have fascinating stories to share!" For the longest time, I have had this idea of starting a magazine. But not just any conventional magazine, one that shall serve as a platform for the students and alumni of International faculty at Grodno State Medical University to share their stories. A platform that enables students to share their takes on various curricular and extracurricular aspects of medicine. Thus, the idea of **'The Horizon'**, came to life.

DR. MEHUL H. SADADIWALA, FOUNDER, CLASS OF 2023

'The Horizon' will be a creative intersection where students can freely give commentaries about Lifestyle, Culture, Productivity tips, and more. Throughout the years, many individuals at GrSMU have inculcated valuable skills and gained experience with a fair share of success in various disciplines. Maybe you run a successful YouTube channel or an educational website, or maybe you are a successful student-researcher or an educator, and so much more. 'The Horizon' enables students to share their personal experiences. The insights that you share will encourage other students to take further strides and explore future possibilities.

'The Horizon' is supported directly by the Dean of the International Faculty, and it will operate under the supervision of the International Students' Scientific Committee. Students from 1st to 6th year, and even graduates, can submit their blogs to this magazine. The articles should directly or indirectly revolve around student life to share knowledge and the collective growth of students.

EDITOR'S DESK

> I'm a sixth-year student at Grodno State Medical University, and I am passionate about curating captivating content that resonates with readers across diverse interests, especially in lifestyle medical blogs. With my keen sense of trends and attention to detail, I collaborate closely with writers and creatives to produce vibrant, informative pieces that inspire and inform. My editorial approach combines creativity with precision to ensure each story is visually appealing and thoughtfully composed. I am dedicated to delivering fresh, relevant content.
>
> As an editor-in-chief, I thrive on bringing lifestyle topics to life in ways that deeply connect with audiences. I am truly grateful to the ISSS for this incredible opportunity.

**L.R. SATHISHA DESHAN LIYANAGE
EDITOR-IN-CHIEF (OCT-DEC, 2024)**

> I have always had a keen interest in a variety of medical disciplines and writings outside of medical training. My journey into this field has afforded me the chance to expand my expertise in writing and research.
>
> As the editor-in-chief, my goal is to assist all of my fellow students and work with them to push the boundaries of knowledge. I'm excited to share fascinating insights and concepts!

**MARYAM ANOOSHA
EDITOR-IN-CHIEF (OCT-DEC, 2024)**

And a message to our dearest readers, we would like to invite you all, students and alumni, to share with us the blogs that directly or indirectly revolve around student life, to share knowledge and experiences that has had an impact on your growth within and outside the bounds of our university.

Concluding, let us alter the limitations of our individual efforts and collectively explore limitless Horizons.

FROM CLASSSROOM TO COMMUNITY : CULTIVATING COMPASSION AND UNDERSTANDING IN MEDICAL STUDENTS THROUGH COMMUNITY SERVICES

This blog mainly focuses about the benefits which a medical student can gain in engaging in various community services during their student life and how they affect afterwards in their professional life.

WRITTEN BY
SHANI
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INTRODUCTION

Medical students benefit greatly from community service because it gives them the opportunity to interact with many people and apply the knowledge that they have learned outside of the classroom.

In addition to developing students' academic knowledge, community service re-establishes social responsibility, understanding, and awareness of important health issues in society.
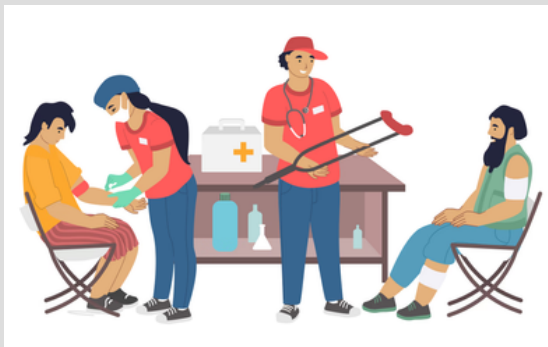
BENEFITS OF COMMUNITY SERVICE

• Opportunity to apply theoretical knowledge on a practical setting.

Physiology, and clinical skills are often the focus of medical education. However, students can see how these ideas are applied in the real world through community service.
By volunteering at a clinic, fair, or exhibition, students learn how to become familiar with the

clinical environment, gain first-hand experience in nursing and understand how to make health decisions that affect patients. This hands-on experience greatly prepares them for future medical practice.

• Understanding different cultures.

Through community service, medical students meet people of different races, ethnicities, and backgrounds. Students learn about other religions and cultures by interacting with patients in community settings, which helps them practice self-care and care.
They learn about how different people of different backgrounds would like to be addressed by thereby establishing patient doctor rapport, which is an essential component into the gateway of diagnosis of following pathology.

• Developing Compassion and Empathy in Medical students.

This knowledge is especially important for reducing health disparities and improving outcomes for vulnerable people like patients with serious conditions such as diabetes, who has a lack of accessibility to medical care. These encounters create compassion and empathy, which are important for all therapists.

Interacting with patients in these settings allows students to see human medicine, as students are reminded that there is a specific explanation

behind every diagnosis.

• Pathway for developing the ability to work as a team and /or leader

Community organizations are part of community service. Medical students gain leadership and teamwork skills from these experiences, which are essential to the practice of medicine. By learning how to work effectively on teams and communicate across disciplines, students are better prepared for collaborative healthcare, where teamwork is essential to good patient care.

• To be a better version of onself

Healthcare students who participate in community service develop a sense of civic responsibility and accountability. Individuals who participate in service projects often continue this passion throughout their careers through advocacy, public health advocacy, or volunteer work. Their commitment is not only to improving their own development, but also to improving the communities in which they work, resulting in better healthcare.
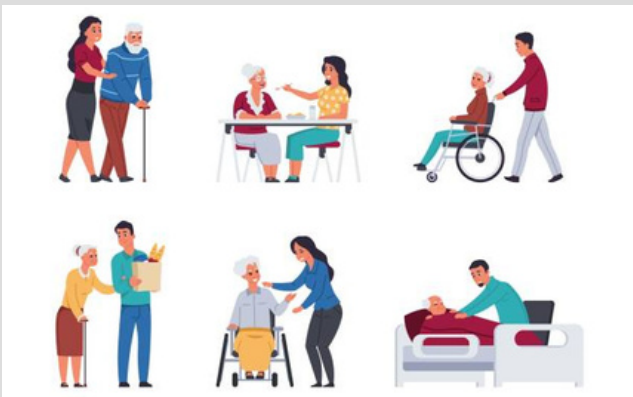
CONCLUSION

Many factors influence students' lives. It increases commitment to patient care, provides hands-on learning opportunities, and enhances interpersonal skills. Medical students who participate in community service as future physicians can better address today's healthcare needs and support the health and well-being of their communities.

After all, community service not only helps them become professional, compassionate professionals, but also inspires them and to improve the lives of others.

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THE ROLE OF ARTIFICIAL INTELLIGENCE IN EVERYDAY LIFE

From smartphones in our pockets to smart assistance in our home, AI is deliberately becoming a part of our lives. In this blog, we will explore some of the most common applications of AI in daily life and how we can use them to enhance the quality of our lives.

WRITTEN BY

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INTRODUCTION

Artificial intelligence is a specific branch of computer science that depicts thought processing, decision making, and the ability to solve simple to complex tasks through computer algorithms. In some cases, they have succeeded to beat the human brain in given fields. It is a combination of data collection, data preprocessing, choosing the right algorithms, model training, evaluation, deployment, and iterative improvement. As technology evolves, so do the methods and techniques used to develop more advanced AI systems.

USES OF AI IN DIFFERENT FIELDS

1. HEALTHCARE SYSTEM,

AI has numerous applications in the healthcare industry, ranging from predictive software for rare disease diagnosis to robotics in hospitals and clinics. Such applications in healthcare include:

Early diagnosis: Evaluate the patient and illness data to forecast a patient's risk of contracting a disease and either identify it early or assist in its complete prevention.

Disease tracking: How an infectious disease might spread over time or within a particular region by using predictive analytics.

Drug discovery: Recommends medications as well as potentially hazardous interactions between them.

2. HEALTH AND FITNESS.

Wearable devices like fitness trackers and smartwatches can be used to monitor our physical activities, sleeping patterns, calorie intake, and even our heart rates. AI algorithms analyze these data to provide insights and personalized recommendations for improving our health. For instance, suggesting daily miles to complete to burn the suggested number of calories, healthy diet combinations, setting a target for sleeping hours, and coming up with daily schedules to improve the productivity of our lives.

3. EDUCATION.

Out from our traditional classroom, AI enables personalized learning experiences tailored to individual students' needs. By analyzing data on student's performances, learning style, and pace, AI-driven platforms can recommend resources and activities that best suit each learner and help to optimize knowledge. Assists with our homework and study materials. For instance, AI tools can break down complex content and explain concepts in an understandable manner, making learning more interactive. Also, we

can meet in virtual classrooms. It tracks our engagement and performance to suggest adjustments in teaching methods.

Moreover, AI tools can streamline administrative tasks in educational institutions, from grading assignments to managing schedules. By automating these processes, educators can focus more on teaching and interacting with students.

4. TRANSPORTATION.

Sometimes we find driving at night very challenging, but we can improve the situation by AI-powered vehicles since they can identify pedestrians in images and in videos automatically.

AI utilizes computer vision and machine learning to manage and optimize data collected from multiple sensors and cameras installed along roadways. Through the analysis of this information, AI systems can uncover traffic patterns and generate insights for forecasting traffic conditions and possible obstructions. This capability allows for the early identification and prediction of factors that may contribute to congestion. To improve parking management, parking lots can be equipped with sensors that measure the distance between cars to identify available spots. However, since these sensors cannot read license plates, integrating cameras and computer vision is essential. AI employs automatic number-plate recognition to accurately identify parked vehicles and track the duration of their parking.

5. FINANCE.

AI algorithms can be used to manage budgets, analyze investments, and understand financial markets through personalized financial advice and automated tools.

It provides tailored financial advice and product recommendations, predicts and quantifies risks for effective portfolio management. In industrial wise, AI is useful to analyze data for optimal trade execution, especially in high-frequency trading, identifies deceitful patterns in transactions, enhancing accuracy, assesses credit risk using diverse data sources for better lending decisions, enhance customer service by handling inquiries autonomously using "chatbots" and automates repetitive tasks to improve efficiency.

6. ENTERTAINMENT.

AI can play a key role in the entertainment field in numerous ways. In content creation, AI tools can assist in generating scripts for movies and shows by analyzing successful patterns and structures, allowing for innovative story telling techniques. In addition, AI algorithms can compose music and generate melodies, often collaborating with human artists to create unique sounds. When considering streaming platforms, they are utilized with AI to analyze user preferences and viewing habits, providing personalized content recommendations that enhance user engagement. Moreover, AI technology can animate characters by mapping human facial expressions into digital avatars, improving the realism of animated films and video games.

ETHICAL CONSIDERATIONS

Considering the healthcare field, patients' data used for applications must be protected to prevent breaches and misuses, and patients should be informed about how their data is used and the role of AI in their treatment decisions.

Fitness app collects sensitive health data, raising concerns about how this information is stored, shared, and used.

In the education field, students are becoming more reliance on AI tools may undermine critical thinking and problem-solving skills among students.

Protecting sensitive financial data from breaches is essential to maintain customer trust and comply with regulations. Moreover, the automation of financial

services may lead to job displacement.

When it comes to entertainment, AI-driven recommendations can lead to addictive behaviors, as users may be manipulated into consuming more content than intended. Questions about the copyright and ownership of content generated by AI, particularly in music and art, will arise.

CONCLUSION

While AI has the ability to transform various industries positively, it is essential to address ethical considerations to ensure that technology is used responsibly and equitably. With thoughtful consideration, we can unlock the full potential of AI to enhance our lives while safeguarding our values and rights.

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THE NEUROSCIENCE OF MUSIC: HOW TUNES AFFECT THE BRAIN

In the grand symphony of life, music holds a special and deep influence on the psyche and emotions of our being. It is not only an art but a medium with depth that reverberates deep inside us, cuts across boundaries, and traverses across cultures. Where music meets neuroscience, some interesting facts turn up as to how melodies and rhythms influence the architecture and functioning of our brain.

WRITTEN BY
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INTRODUCTION

Music essentially is a complex audio sensation that stimulates almost all of the different regions in the brain. While listening to any kind of music, it triggers neural activities, which harmonize the activity in our sensory, motor, and emotional systems. This whole operation occurs in the auditory cortex, where the sound waves are converted into electrical signals. The brain decoded these signals here, interpreting pitch, rhythm, and melody.

EMOTIONAL RESONANCE: MUSIC AND THE LIMBIC SYSTEM

One of the fascinating things with music is how it can make us feel. Neuroscientific studies have shown that the limbic system, generally considered the emotional center of the brain, becomes engaged when a person listens to music. Limbic structures include the amygdala responsible for processing emotions, the hippocampus that takes part in memory storage, and the nucleus accumbens involved in the reward pathway. This may imply that a song could give rise to anything from feelings of great joy and excitement right through to feelings of melancholy and nostalgia

REWARD SYSTEM AND DOPAMINE RELEASE

Music also greatly impacts the reward system of our brain. Pleasurable music stimulates the release of dopamine, a neurotransmitter associated with pleasure and reward. That is why music can produce some kind of euphoria and can be as satisfying as any other fulfilling activity like eating or socializing.

This can be further enhanced with anticipation of the climax of the music or when an expected part of the song has started, creating suspense and excitement.

COGNITIVE ENHANCEMENT THROUGH MUSIC

In addition to its emotional impact, music acts as a channel through which cognitive abilities can be enhanced. Research has demonstrated that music, whether through listening, playing instruments, or singing, enhances the level of cognition in memory, attention, and even spatial-temporal skills. For instance, learning to play a musical instrument involves the incorporation of sensory information with fine motor activity and intricate cognitive processes. Such multisensory input feeds neural connections and may cause brain plasticity, the

ability of the brain to change and reorganize itself.
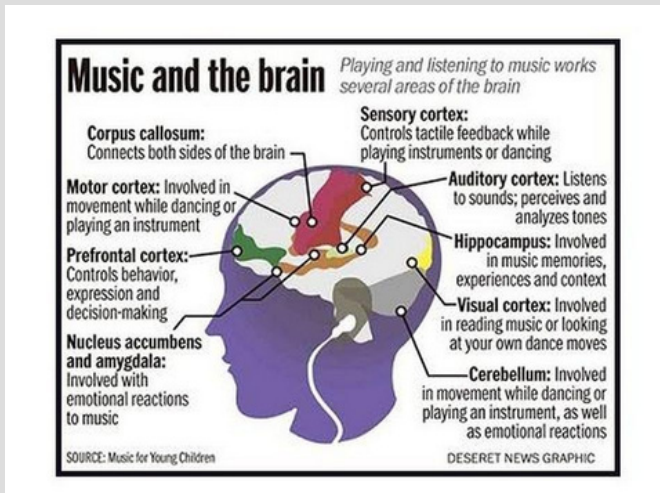
MUSIC AND SOCIAL INTERACTION

This influence moves on to social interactions. Music is a strong motivator of social bonding and communication. Group musical activities such as choirs or orchestras which develops a sense of community and cooperation.

Such shared experiences may reinforce social bonds, improving feelings of empathy and confidence in others. Shared delight in the creation and experience of music together results in a sense of belonging and mutual understanding.

THERAPEUTIC BENEFITS OF MUSIC

Music has also been tapped for its therapeutic benefits in therapeutic contexts. Music therapy is an evidence-based practice that leverages the therapeutic effects of music in treating a host of problems: psychological, cognitive, and physical.

Individuals with neurological conditions, such as Parkinson's disease or stroke, may employ music therapy to aid in motor rehabilitation and to facilitate improved coordination of movement. Individuals who suffer from various mental health issues, including depression or anxiety, can find emotional solace in music, reducing stress and aiding relaxation.

PHYSIOLOGICAL IMPACT: ENTRAINMENT

Moreover, rhythm and beat can fall in step with the natural rhythms of the body, thus influencing physiological processes through something called entrainment.

Entrainment is when the music rhythm aligns with heart rate, breathing rate, or brain waves. For example, peaceful music with slow rates can decrease heart rate and blood pressure, which commonly results in relaxation.

Fast and energetic rhythmic music can make us excited and invigorated, thus increasing endurance and physical performance.

UNIVERSALITY OF MUSIC

The universality of music underlines that it plays a central role in human experience. Throughout cultures and eras, music has provided a medium of expression, communication, and unity.

It's a testament to the wide-ranging effects sound and rhythm have on the human brain. Neuroscience keeps revealing diverse ways in which music shapes our brains, showing how musical harmony skates around neural circuits.

CONCLUSION

Neuroscience, in a nutshell, is the field of music that gives us an overview of how our brains are so deeply touched by melodies and rhythms. Apart from literally triggering emotions and cognitive functions in our brains, it acts on our feelings, enhances cognition, builds up bonding, and has therapeutic effects—all related to and benefiting from music. These intriguing crossroads continues to give more meaning to the symphony of neural activities that is triggered every time we engage with music.

In the words of Plato, "Music gives a soul to the universe, wings to the mind, flight to the imagination, and life to everything."

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RESOLUTIONS TO REINVENTION

9

This blog emphasizes effective ways to set and achieve your New Year's resolutions that will benefit your mental and physical growth.

WRITTEN BY
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INTRODUCTION

What makes millions of people decide to make a change at the start of each year? Many people set grandiose resolutions during the new year simply because it feels like a new beginning. Pursuing goals might occasionally push people to take on more than they can manage, but it also provides excellent opportunities of tackling hurdles with resiliency and perseverance.

Despite the fact that they may not always be kept up, resolutions are nevertheless worthwhile.

SET A DEFINITE GOAL

Pick a very clear, attainable goal. Decide on something more specific that you are able to aim for rather than having such a vague goal. You may also figure out how you will achieve and sustain your goal throughout the entire year by setting a clear, reachable target.

TAKE SMALL STEPS

Although you may have a lengthy list of attainable New Year's resolutions, choose just one and devote all of your efforts on it instead of balancing multiple chores. Reaching even the smallest achievement can increase your self-confidence.

PLAN YOUR GOALS AHEAD

Establishing a thorough written strategy can assist you stay on track, which is an essential step for success. Hence, we ask ourselves, why? For instance, it enables you to reflect on the strategies you will employ in the case of obstacles. Being clear about what you want to accomplish, and any roadblocks can assist you remain on track with your goal and tackle any challenges that may stand in your way. You could begin by expressing your goal in writing, outlining potential steps to reach it, and identifying any possible hurdles.

SUCCESS IS ACHIEVED THROUGH SMALL STEPS

A typical reason for the failure of many New Year's resolutions is taking on too much at once. Your goals are certain to be derailed if you start a wildly limited diet, go overboard at the gym, or drastically try to change your usual behavior. Therefore, be mindful to take small steps, one at a time to reach your end goal. Although it may seem like a slow process at first, these gradual adjustments make it possible to maintain your new, healthy routine and maximize the chance of success in the long run.

SEEK VALUE IN WHAT YOU DO

You are unlikely to remain consistent with something if you engage in it because you assume others want you to or because you seek approval from others. Despite the midst of challenges and failures, you are more inclined to stick with an activity if you find it enjoyable or valuable. This will probably resonate with you if you consider the things you do in your own life, regardless of whether they are resolutions.

LEARN TO ADAPT

One of the most frequent reasons why people break their resolutions for the new year is experiencing an obstacle. Don't regard a quick return to a negative habit as a sign of failure. There will be hurdles in your way, and the path to reaching your goal is usually not clear-cut. If your current strategy fails to work, reassess your tactics and create a new one. Being versatile with your strategy and even your ultimate goal—will help you succeed.

CONCLUSION

Recognize that it is a process to work towards your resolution. Regardless of whether you make a few mistakes, you can start over and continue to strive toward your goal. Although accomplishing your goals might require more time than you might expect, be mindful that this is not a competition that you must win. Once you've committed to improving a habit, you might try to keep up the commitment for the remainder of your lifetime. Keep in mind to treat yourself with compassion and flexibility, and to acknowledge and be proud of whatever progress you make. Keep in mind that the journey is just as important as the destination.

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