TOGGLE

WEEKEND LIVING IN THE DIGITAL AGE

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COVER: ZARIF FAIAZ

enter the
deep web

3rd edition of Bangabandhu Innovation Grant 2023 gets underway

The opening ceremony of the Bangabandhu Innovation Grant (BIG) 2023 was recently held at the BCC Auditorium, Agargaon, Dhaka. This year, the BIG authority plans to select 300 innovative startups during the initial stage. Later, a 3-day boot camp will be organised with the selected startups.

The top 51 startups will then be selected from the boot camp, and the final round will be organised with the top 5 startups. The best startup will be awarded a grant worth BDT 1 Crore, while the rest of the top 50 startups will also be awarded grants worth BDT 10 Lakh each. Budding entrepreneurs can register by visiting the website www.big.gov.bd from March 28 to April 22, 2023.

ChatGPT can be used as a cybersecurity Co-Pilot: Report

Cybersecurity company Sophos recently released new research on how the cybersecurity industry can leverage GPT-3, the language model ChatGPT, as a co-pilot to help defeat attackers. The report details projects developed by Sophos X-Ops using GPT-3's large language models to simplify the search for malicious activity in datasets from security software, more accurately filter spam and speed up analysis of "living off the land" binary (LOLBin) attacks.

Their three prototype projects demonstrate the potential of GPT-3 as an assistant to cybersecurity defenders. All three use a technique called 'few-shot learning' to train the AI model with just a few data samples, reducing the need to collect a large volume of pre-classified data.

The first application Sophos tested with the few-shot learning method was a natural language query interface for sifting through malicious activity in security software telemetry. Sophos also tested a new spam filter using ChatGPT which was significantly more accurate than other models. Moreover they were able to create a program to simplify the process for reverse-engineering the command lines of LOLBins.

2 Bangladeshi World Champion teams participate in the NASA program

Two world-champion NASA Space Apps Challenge teams from Bangladesh participated in the NASA program for the first time.

The champion teams, Team Olik (2018) and Team Mohakash (2021) participated in the NASA program on 15th and 16 March 2023 at the NASA headquarters in Washington DC, USA.

Team Olik won the 'Lunar VR Project' Best Use of Data category for a virtual application that would experience travel to the moon in 2018.

Team Mohakash became the World Champion in the NASA Best Mission Concept category in 2021.

The 2018 world champion Team Olik is from Shahjalal University of Science and Technology (SUST). Meanwhile, the 2021 world champion Team Mohakash is a combined team from Khulna University of Engineering and Technology (KUET) and Bangladesh Army University of Engineering and Technology (BAUET).

The NASA Space Apps Challenge is organised in Bangladesh by NASA annually under the guidance of the Bangladesh Association of Software and Information Services (BASIS), in collaboration with BASIS Students Forum.

vivo launches V27 and V27e smartphones in Bangladesh

vivo has recently launched two of its V series smartphones, V27 and V27e in Bangladesh.

Vivo V27 features a MediaTek Dimensity 7200 processor and is equipped with a 4,600mAh battery. The 66W FlashCharge technology helps with quick charging. The device also boasts 256GB storage alongside 8GB RAM.

Vivo V27e is powered by the MediaTek Helio G99 processor and comes with 66W FlashCharge technology as well. The device comprises 256GB storage and 8GB+8GB extended RAM.

Both smartphones come with a triple camera setup, with the V27 5G having a 50MP main camera, 8MP wide-angle camera and a 2MP macro camera. On the other hand, the V27e has a 64MP main camera with a 2MP depth camera and a 2MP macro camera.

Vivo V27 5G comes in two colours: Magic Blue and Noble Black while the Vivo V27e is available in two colours: Lavender Purple and Glory Black.

Vivo V27 5G is available at Tk. 54,999/- and the V27e is available at Tk. 32,999/- in Vivo-authorised showrooms.

Spotify removes hundreds of Bollywood songs from the platform

Numerous Bollywood songs, including 'Malhari' from Bajirao Mastani and 'Kala Chashma' from Baar Baar Dekho, have reportedly been taken down from Spotify due to alleged disagreements with copyright holders, according to BBC. After the previous copyright expired, Spotify reportedly was unable to come to an agreement with the owners of a number of Bollywood songs.

Spotify recently added a new feed as part of its biggest redesign to date, which takes inspiration from TikTok and YouTube. The changes coincide with Spotify's growing shift away from the traditional song and album collections it began with and towards new categories of content like podcasts.

How Bangladeshi students are adjusting to Ramadan

AHMAD TOUSIF JAMI

While adjusting to Ramadan commitments can be difficult for anyone, it can be particularly challenging for practising Muslim students. As the holy month involves additional prayers and religious activities, it adds up to the already packed schedule of the students. However, there is no one common approach taken by local students in this regard, as different individuals try and adjust in their personalised ways based on their specific needs. Following are some commonalities in local students' approaches to adapting to Ramadan and some tips and tricks for tackling this strenuous yet rewarding month.

Planning ahead
Many students prepare early for Ramadan by planning their commitments, workloads and lifestyle. This is helpful because if students have backlogged tasks dragged into Ramadan, it might make their life even more challenging. Sarfaraj Mehrab Ahmed, a final year student from the Independent University, Bangladesh (IUB), explained that he started planning for Ramadan at least two months before. "I do not keep any pending tasks held up, and I chalk out my commitments in a way that I have personal commitments easier on me this month," he explains.

Planning ahead can be a helpful skill in general - even outside Ramadan. When you plan ahead, you can set specific goals for what you want to achieve in the future. This keeps your mind sharp and motivated towards your objectives. During Ramadan, planning ahead also helps save time for prayers for practising Muslim students.

Managing energy level
Hridita Islam, a second-year student from the Institute of Business Administration, University of Dhaka (IBA, DU), shares, "I try to take less work this month compared to other months." "This helps me balance my energy since I can allocate this additional energy to religious practices," she explains.

As fasting day is physically demanding, so are the other religious practices in Ramadan - students often face a change in their energy level. To address this, students often lighten up their workloads. On the other hand, Sarfaraj shares that staying hydrated helps him feel less drained and helps him stay consistent with feeling energetic.

Breaking fast on the roads
Many unique challenges pop up this month, such as increased traffic around evening till iftar. Although unfortunate, this often makes reaching home in time for an iftar difficult. This is especially true in cases where the university has in-person classes till late evening, and the student lives somewhat distant from it.

Adib Faisal, a fourth-year student from North South University, shares, "My university classes end only two hours before iftar. Although I do not live much far, the traffic becomes so congested that almost every day I have to break my fast with just date and water that I carry in my bag." He explains this is one of the most challenging factors, as he often misses sharing his iftar with family.

Calibrating external commitments
Many university students have other commitments, such as part-time commitments or freelance work. Students must adjust their other obligations accordingly as the total available hours that students typically dedicate to their activities decrease this month because of devoting that time to religious commitments.

Hridita explains that her workplace had decreased total work hours, but the ongoing projects remain. As such, she has to cram up more work in less time, which has increased pressure. She said she looks at this as a process of learning, where her efficiency is increasing through challenging times at her workplace.
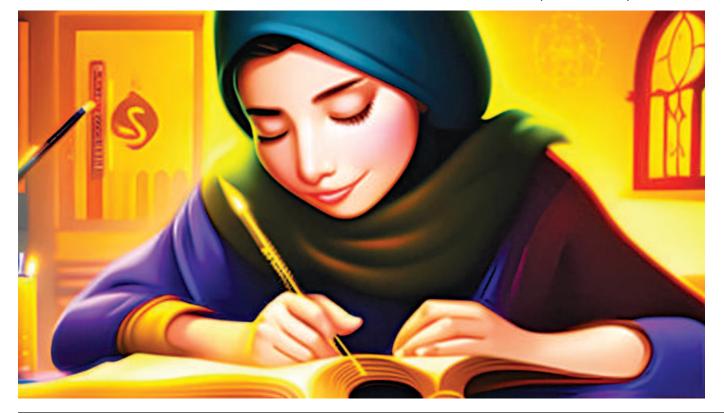
Adjusting sleep cycle
As the holy month requires additional prayers and religious activities - students have fewer hours for other tasks. As such, students attempt novel ways to deal with it. Sarfaraj shares, "I do not sleep before sehri and keep working until that time." He explains this helps him get his everyday tasks done. Although it comes at the cost of a changed sleep cycle and is arguably unhealthy, he says this is the only way he completes her deliverables.

Focusing on the positives
Hridita shares that the sense of community and connection fostered during Ramadan is something she looks forward to each year. "Fasting knowing your friends and family is doing the same as you, especially so in the hope of good outcomes during challenging times brings us closer," she explains.

Despite all the challenges the month comes with, most students happily make it through as they take it as a religious test. The month indeed comes with opportunities to reflect on one's spiritual journey, and students find that it helps them focus on their studies and priorities.
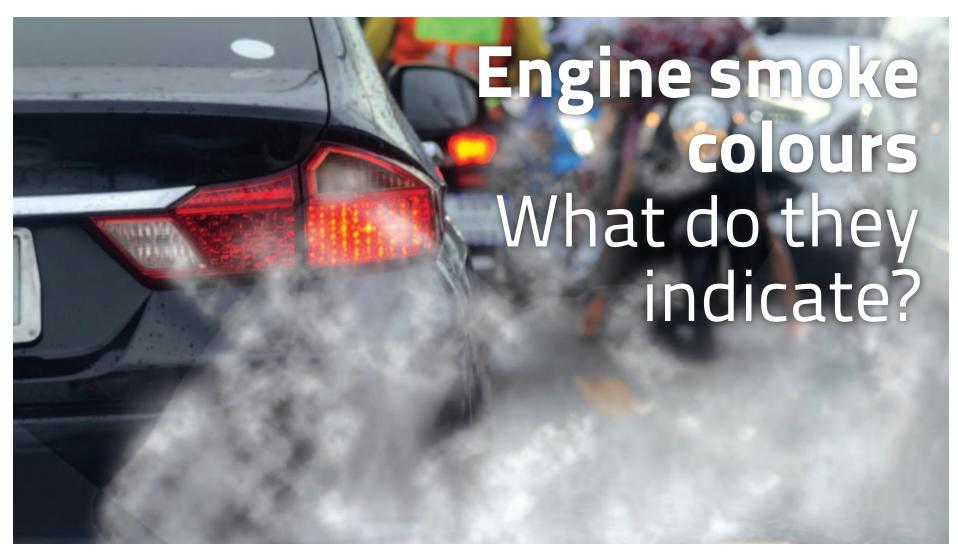
Engine smoke colours
What do they indicate?

ARFIN KAZI

Cars with a combustion engine in them tend to produce byproduct gases after a complete cycle, which usually gets out of the exhaust pipe, where there are many things such as catalytic converters which purify the gases further to give off a clean fume. In many instances, cars can give off fumes which can be of different colours, where the colour of the fumes that come out of an exhaust pipe provides crucial insight into the health of a car's engine. Oftentimes, this smoke could just be water vapour. However, it could also indicate a potential head gasket leak. Hence, it is important to be wary of what kind of colour the smoke coming from your engine is – and what the colour indicates. Here is a quick guide on the possible indication of the different kinds of engine smoke colours.

Black smoke

Black smoke can be an indication that the engine might be burning too much fuel. This can be caused by a variety of issues which can be as simple as a clogged air filter, or it can arise from major problems such as a malfunctioning fuel injector or even a vacuum leak - which can cause the engine to burn more fuel than necessary, leading to decreased fuel efficiency and higher fuel costs. Black smoke can also be a sign of a more serious problem, which can indicate an engine is worn out or on the verge of dying. As such, it is important to spot black smoke and take necessary precautions as soon as possible.

Blue smoke

Blue smoke isn't quite typical as far as engine smoke colours go - and sometimes it can also mean that oil has mixed with the gas in the combustion cycle, with burnt oil being sent out through the exhaust pipe alongside any other half-burned fuel. This is an indication that engine oil is being burnt inside the engine, which is usually caused by valve seals or piston rings which are worn and dated, allowing oil to leak into the combustion chamber. Blue smoke can also be a sign of more serious problems, such as a damaged engine or engine oil being clogged.

White smoke

White smoke right after a car starts which usually tends to go away is generally not a problem, as it just might be built-up condensation which evaporates. Consistent white smoke can be an indication that the engine is burning coolant, which can be caused by a leaking head gasket or a cracked engine block. Burning coolant will also reduce the coolant level in the engine, leading to overheating and potentially resulting in engine damage or failure. Aside from that, white smoke can also be a sign of a more serious problem, such as a damaged engine or a malfunctioning cooling system - making it another smoke colour to particularly watch out for.

Grey smoke

Grey smoke can be an indication of a variety of issues, such as engine burning oil, which can leak in the combustion chamber and eventually damage the catalytic converter. This usually happens from a damaged valve stem seal, which lubricates the valves and maintains the correct air-fuel ratio. It can also indicate failed piston rings if grey-blue smoke comes out of the exhaust pipe.

It is important to note that any smoke coming from the exhaust pipe can be a sign that something is wrong with the engine and should be addressed as soon as possible. Regular maintenance can help prevent these issues and keep your car running smoothly.

Additionally, the colour of fumes coming out of an exhaust pipe can be used as an indicator of engine health. Black smoke may mean too much fuel is being burnt, blue smoke indicates oil is being burnt, white smoke means coolant is being burnt and grey smoke can indicate a variety of issues. It is best to address any smoke issue as soon as possible to prevent further damage to the engine.

What is the 'Dark Web'?

In recent years, the term 'dark web' has become a buzzword in popular culture, often associated with illegal activities and criminal behaviour. Pop culture also often associates a lot of illegal activities with the concept of the 'dark web' because of the anonymity that it provides to users, with a lot of Western movies and shows depicting 'dark web' users as being difficult to track down by law enforcement agencies.

However, just like the regular internet, not all activity on the dark web is illegal or unethical. Many people use the dark web for legitimate purposes such as privacy concerns or sharing sensitive information. Despite the many rumours surrounding the concept, not all of us may know exactly what the dark web is, and how it works. Here's a quick rundown of the things you need to know.

The dark web is a part of the internet that is not indexed by traditional search engines like Google, Yahoo or Bing. Instead, it is accessed using special software or configurations, such as the Tor browser. Such methods route internet traffic through a series of servers and encrypt the data to provide anonymity to the user. This makes it difficult to trace the origin of the data or identify the user who is accessing it. As such, the user can browse the internet anonymously without revealing their identity or location.

As one might expect, the anonymity of the dark web has made it a popular destination for individuals engaging in illicit activities such as drug trafficking, weapons sales and child pornography. However, as mentioned before, it is important to note that not all activity on the dark web is illegal. Many journalists, activists and whistleblowers use the dark web to share information without fear of censorship or surveillance. They also use the dark web as a method of communication with sources securely through encrypted messaging services and forums. These covert methods of sharing information add an extra layer of protection against hacking attempts from unsuspecting third-party intruders.

One of the most notorious marketplaces on the dark web was Silk Road, an online marketplace that facilitated the sale of drugs and other illegal items such as fake IDs and hacking tools. Silk Road primarily ran on the cryptocurrency Bitcoin, which made it more difficult to track down records of transactions. The Silk Road operated for several years before it was shut down by law enforcement in 2013. Since then, numerous other marketplaces have emerged to take its place, including AlphaBay and Hansa.

These marketplaces operate similarly to traditional e-commerce websites, with vendors selling their wares and buyers placing orders using various forms of cryptocurrency. However, the anonymity of the dark web makes it difficult for law enforcement to track down those involved in illegal activity. Some of the bigger sites are still occasionally taken down and operators are consequently arrested. Nonetheless, with the anonymity that the dark web provides, new illegal marketplaces tend to pop up again quite fast.

In addition to marketplaces, the dark web also contains forums and chat rooms where individuals can discuss a wide range of topics, including politics, religion and technology. A popular topic in the dark web is hacking and cyber security - with a lot of forum users frequently sharing hacking tips and discussing software vulnerabilities. These forums can be a valuable resource for individuals seeking information or advice on sensitive topics, but they can also be breeding grounds for extremist ideologies and hate speech. As such, it must be noted that many of these forums are illegal and engaging in activities on them can result in serious legal repercussions.

One of the biggest risks of using the dark web is the potential for malware and phishing scams. Phishing scams on the dark web typically involve attempts to steal sensitive information, such as usernames, passwords, and credit card numbers, by impersonating a legitimate website or service. Because many dark web sites are not verified or regulated and users may unknowingly download malicious software or provide their personal information to scammers. Since the dark web is a popular place for hackers, you always run the risk of having your data stolen by more experienced users.

Despite these risks, the dark web can be a valuable resource for individuals seeking privacy and security online. By using special software and configurations, individuals can browse the internet without revealing their identity or location, making it difficult for governments or other entities to track their online activities.

With all that being said, it is important to approach the dark web with caution and take steps to protect your personal information and online security. This includes using a VPN, avoiding suspicious links or downloads, and being mindful of the information you share online. Like on the regular internet, be sure to use strong passwords and be wary of clicking on links or downloading files from unknown sources - as they may contain malware.

HANDS-ON REVIEW

REALME 10 PRO 5G COCA-COLA EDITION

A fizzy red phone for the fanboys

SHAHRIAR RAHMAN

As we enter the era of 5G, smartphone manufacturers are racing to offer devices that can take advantage of faster speeds and lower latency. And Realme, the Chinese brand that's been making waves in the mid–range smartphone market, is certainly no exception.

But Realme has taken things up a notch with its latest offering: the Realme 10 Pro 5G Coca-Cola Edition. Yes, you read that right – a smartphone that's branded with the iconic Coca-Cola logo. In this review, we will take a closer look at the Realme 10 Pro 5G Coca-Cola Edition and see how it stacks up against the competition.

The partnership between Realme and Coca-Cola is certainly an interesting one, and it's clear that the two brands have put a lot of thought into this collaboration. The phone comes in a striking red and white colour scheme that's instantly recognisable as Coca-Cola. And the logo is prominently displayed on the back of the phone, along with the Realme logo.

In the box, you'll find the phone, a fast charger, a USB-C cable, and a protective case. But what sets this limited edition apart is the inclusion of a set of Coca-Cola stickers that can be used to customise the

PHOTO: **SHAHRIAR RAHMAN**

back of the device. It's a fun addition that will no doubt appeal to fans of the iconic soft drink.

But let's not forget that this is still a smartphone, and it needs to stand up to

scrutiny on its technical merits. So, how does the Realme 10 Pro 5G Coca-Cola Edition stack up?

First of all, let's talk about the design. As I've already mentioned, the phone looks great. It's a sleek device with a 6.7-inch display that's bright and clear. The phone feels good in the hand, and the buttons are well-placed and easy to reach.

But what about the performance? The Realme 10 Pro 5G Coca-Cola Edition is powered by a Qualcomm Snapdragon 695 5G processor, which is a mid-range chip that's been specifically designed to offer good performance without breaking the bank. And in this regard, the phone certainly delivers. Apps load quickly, and there's no lag when switching between them. Gaming performance is also impressive – I was able to play demanding titles like Call of Duty Mobile without any issues.

The camera is another area where the Realme 10 Pro 5G Coca-Cola Edition shines. The phone has a dual-camera setup on the back, including a 108-megapixel main sensor and a 2-megapixel depth sensor. And the results are impressive. Photos are sharp and detailed, with good colour reproduction. Low-light performance is also decent, thanks to the Night mode feature.

And let's not forget about the battery life. The Realme 10 Pro 5G Coca-Cola Edition has a 5,000mAh battery, which is a decent size for a mid-range device. And in my testing, the phone easily lasted a full day with moderate usage. And when it's time to charge up, the phone supports 33W SuperVOOC charging, which allows decent charging as well.

In terms of pricing, the Realme 10 Pro 5G Coca-Cola Edition costs roughly $250 in the global market, which is slightly higher than the standard Realme 10 Pro 5G. However, the limited edition device comes with Coca-Cola branding and stickers, which may be worth the extra cost for some consumers. Unfortunately, the special edition device is not officially available in Bangladesh.

So, what's the verdict? The Realme 10 Pro 5G Coca-Cola Edition is certainly an interesting device. The partnership with Coca-Cola has resulted in a phone that's eye-catching and unique. But beyond the branding, the phone also delivers on its technical merits. Performance is good, the camera is impressive, and the battery life is solid. And with 5G connectivity, this phone is certainly future-proofed for the next few years.

Of course, there's the question of whether you want a phone that's branded with a fizzy drinks logo. It's certainly not for everyone, and some may find the branding a bit too in-your-face. But for those who want a device that stands out from the crowd, the Realme 10 Pro 5G Coca-Cola Edition is certainly worth considering.

All in all, I'd say that Realme and Coca-Cola have done a good job with this collaboration.

Riseup Labs: Putting the gaming industry of Bangladesh on the map

Meena is a beloved cartoon character that has been popular amongst the kids of the 90s and even 2000s. This fictional character developed by UNICEF was a way to promote children's rights in South Asian countries. The initial format of sharing these stories was mostly comics, cartoon strips, animated series etc. When UNICEF decided to make a gaming app targeting the kids of today, after rounds of competition, Riseup Labs, a Bangladeshi game developer were hired to develop this app.

Meena is not just one game that Riseup Lab has worked on. They are also the mind behind several commercially successful independent apps i.e. Rooftop Frenzy, Treasure Wars, BlackJack and Game Plan.

Riseup Labs is also known

internationally as a provider of IT solutions including Quality Assurance (QA), Mobile App Development, Solutions for the Internet of Things (IoT), Augmented Reality (AR), Virtual Reality

(VR) Mixed Reality (MR), blockchain, web development, software development, game development and R&D services.

Riseup Labs currently has more than 150 employees working in various key

positions. Ershadul Haque founded Riseup Labs in 2009. Although Riseup Labs got recognition through gaming, the company has been working with various sectors of information technology since the beginning. For photo editing services, they have developed Retouching Lab and Appliance; for gaming, they have also developed a platform.

Right now, Ershadul and his team are preparing to launch a strategic business unit focused on game development. According to the founder Ershadul, they are providing direct services to international brands for years now. "We will keep on continuing that. But the gaming unit needs to be armed for the innovations of tomorrow. That's why we are putting special focus on that," says Ershadul.

FROM THE US TO BANGLADESH
Key lessons for building a strong national cybersecurity strategy

ABIR MAZUMDER

A strong and efficient national cybersecurity strategy is more important than ever as nations depend more and more on technology and the internet. This trend also applies to Bangladesh as it seeks to defend its citizens, digital assets, and critical infrastructure from cyber threats.

On March 2, 2023, the United States published its most recent national cybersecurity strategy. This strategy illustrates the nation's priorities and approaches to safeguarding its digital ecosystem, and it provides useful insight and lessons that developing nations like Bangladesh can learn from and adapt.

First, one of the most important lessons drawn from the US strategy is the significance of a comprehensive approach to cybersecurity. The strategy emphasised the necessity of cooperation between several sectors - including those of government, private organisations, academia, as well as international partners. In order to combat the constantly changing nature of cyber threats and make sure that everyone in society has a thorough grasp of cybersecurity risks, a collaborative approach is essential.

Bangladesh can take inspiration from this approach and seek to encourage better stakeholder cooperation in its own cybersecurity strategy. For example, the government should cooperate more closely with private organisations to build cooperative efforts for cyber threat

identification and response. Additionally, it might collaborate with

academic institutions to create a talent pipeline for cybersecurity specialists and form alliances with international organisations to exchange best practices and get more understanding of current trends in cybersecurity around the world.

Secondly, the US National Cybersecurity Strategy highlights the significance of effective governance and leadership in cybersecurity. The strategy called for a "whole-of-government" approach to cybersecurity, with distinct lines of duty and accountability for cybersecurity activities.

Similarly to this, Bangladesh needs to ensure its governance system is both transparent and functional in order to regulate its cybersecurity strategy. This could entail strengthening the agency tasked with developing and implementing cybersecurity policies and regulations as well as coordinating cybersecurity practices across various government agencies.

Thirdly, the US National Cybersecurity Strategy highlights the importance of cybersecurity education and awareness. The strategy recognises that companies

and individuals are frequently the very first line of defence against cyber threats and that it is crucial to give them the resources and information they need to identify possible attacks and respond accordingly.

In Bangladesh, more funding is required for cybersecurity education and awareness campaigns. This might entail creating cybersecurity training courses for government officials, employees in the private sector, and the general population. The government might also collaborate with academic institutions to include cybersecurity education in the curriculum, thereby fostering a culture of awareness and understanding of cybersecurity issues from an early age.

Last but not the least, the lack of a specific emphasis on protecting the nation's critical infrastructure is yet another important area of improvement in the Bangladesh National Cybersecurity Strategy. In recognition of the catastrophic effects that a cyberattack on these critical infrastructures may have on public safety and the economy, the US National Cybersecurity Strategy lists the protection of critical infrastructure as a

top priority.

Bangladesh must develop an in-depth plan to safeguard its key infrastructure, such as its power grids, water supply systems, and transport networks. This could entail the creation of policies governing the use of internet-connected hardware in critical infrastructure as well as the formulation of guidelines for the security and functioning of these systems.

In conclusion, Bangladesh may benefit greatly from the United States National Cybersecurity Strategy as it seeks to improve its own cybersecurity framework. Important takeaways include the necessity for a collaborative and holistic approach to cybersecurity, robust leadership and governance frameworks, funding for cybersecurity awareness and education, and a targeted effort to secure critical infrastructure.

It is crucial that the government of Bangladesh takes these lessons to heart and strives to incorporate them into its own cybersecurity strategy as it continues to navigate the quickly changing cyber threat landscape. By doing so, Bangladesh can better defend its citizens and digital assets from the ever-present threat of cyberattacks.

The author is the Managing Director of AM Square Limited, Director of Beatnik Technology Limited and Standard Essential Company Limited. Views are personal. The author can be contacted at abir@amsquaregroup.com.