

# TOGGLE

WEEKEND LIVING IN THE DIGITAL AGE

A publication of *The Daily Star*

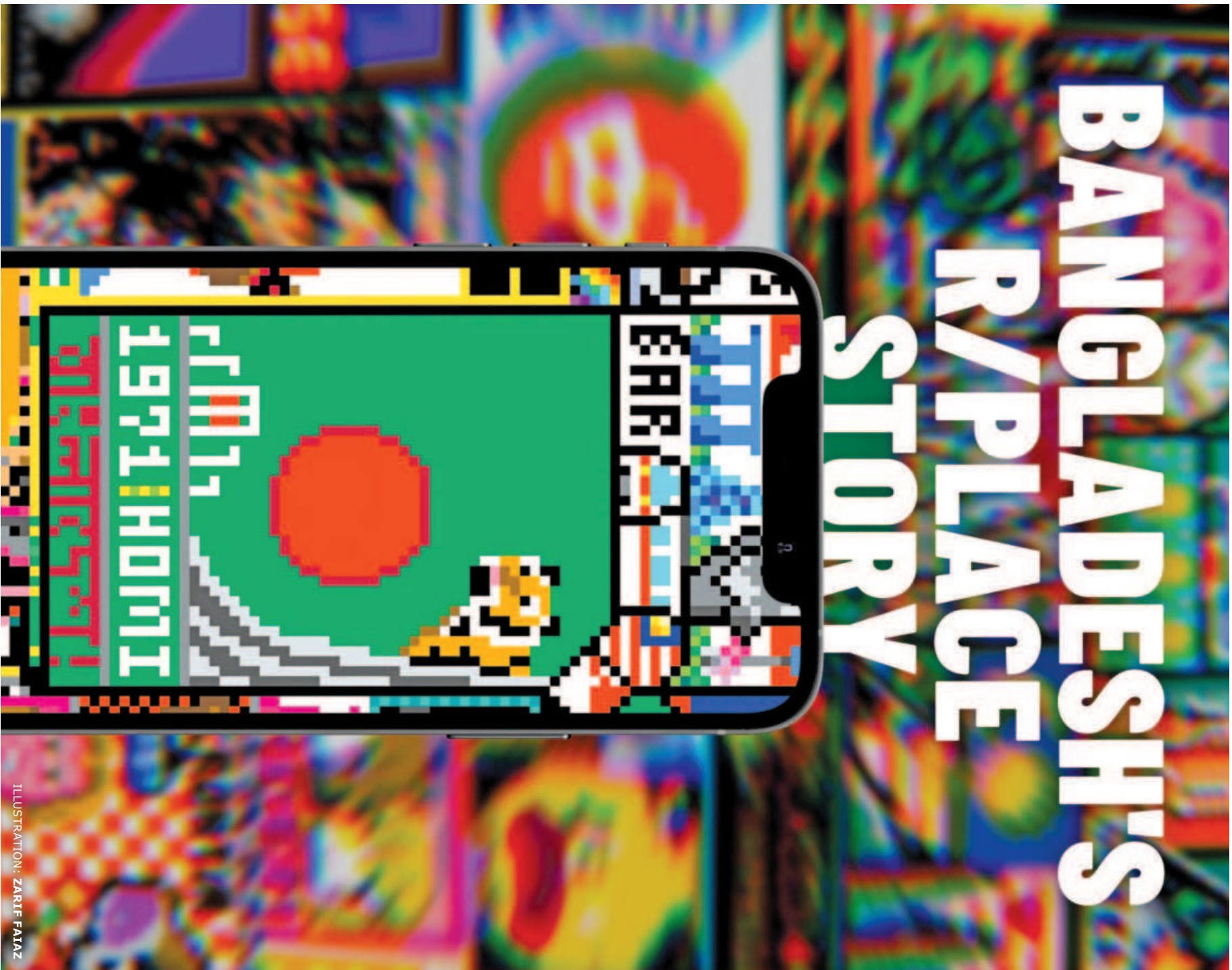


ILLUSTRATION: ZARIF FAIAZ



THE 10th Anniversary 2022  
Season-14

Buying Walton product  
you may get

# 10 LAC TAKA

**SURE CASHBACK**  
Also Products of Crores Taka Free\*

\*Cashless App



Got 10 Lac Taka From  
M/S. Momtaz Electronics  
Deokhola Bazar, Fulbaria, Mymensingh

Md. Abul Hasim

Father: Md. A. Khaleque  
Dashedi, Fulbaria, Mymensingh

**Conditions:**

- Have to complete product registration after buying Walton Fridge.
- This campaign is conducted by fully computerized system fairly.
- Digital campaign facilities will be void in case of more than 3 registrations of fridge from the same mobile number in a year.
- The authority reserves the right to change the campaign anytime.

This initiative is taken to ensure maximum customer facilities through research & development of products and digitalization. Return SMS may be delayed for the technical/network problems.

## WALTON

Smart Fridge

For Details: 16367 | [waltonbd.com](http://waltonbd.com)





Popular real-time battle strategy game 'Age of Empires II: Definitive Edition' has introduced a new DLC (Downloadable Content) expansion, Dynasties Of India, that allows players to play as the Bengalis. The new DLC introduces three new civilisations: Gurjaras, Dravidians and Bengalis. The Gurjara and the Dravidian campaigns follow the stories of Emperor Babur and King Raja Chola, respectively. The Bengali campaign follows the story of Devapala, the 9th century Bengali emperor of the Pala dynasty.

In the game, Bengalis specialise in elephants and naval units. Bengali elephants are more resistant to anti-elephant bonus damage than elephants from other civilizations, in addition to having a strong technology tree. Furthermore, they can improve their attack speed by researching the unique technology Paiks, which also improves Rathas. Bengali ships regenerate hitpoints, allowing them to last longer. These advantages are the result of a strong economy.

When each Age is reached, Bengali

## You can now play as a Bengali emperor in Age of Empires II: Definitive Edition

Town Centers automatically spawn more villagers, and the Bengalis can support a larger economy after discovering the unique technology Mahayana, which reduces the amount of population space taken up by each villager.

In addition to the gold accumulated during each trip to/from an allied Market, Bengali trade units and those of their allies generate food.

Dynasties of India will be available on the Microsoft Store and Steam from April 28, 2022.

### EDITOR'S NOTE

## Pixels of green, red, sweat and tears

The wide world of the web can be a wonderful place. Check out this week's Cover Story on the massive collaborative art project hosted by the subreddit r/place, and how fellow Bangladeshis battled for our spot on the internet's most colourful canvas.

We also reviewed the new Xiaomi Redmi Note 11, test drove the latest 2022 BMW X3 and compiled a list of six local smartphones under Tk. 25k, to be found on Bytes, Shift and Tech Tips respectively. As always, a colourful assortment of contents to look out for!

Ramadan Mubarak and best wishes. Until then.

Shams Rashid Tonmoy  
Sub-editor & Feature Writer

## Samsung Galaxy A13 launched in Bangladesh

Samsung Bangladesh recently launched the latest version of its Galaxy A series: Samsung Galaxy A13.

Samsung Galaxy A13 features an Exynos 2.0 GHz Octa-core processor, geared with Samsung One UI 4.1 which is powered by Android 12. It comes with RAM Plus, which expands the RAM by up to 4GB by borrowing space from the ROM.

It has a 6.6-inch FHD+ display with a glossy back design and is protected with the Corning Gorilla Glass 5. The device is also equipped with a 5000mAh battery and 15W Super-Fast Charging.

The 50MP main camera is accompanied by a 5MP ultra-wide camera, 2MP depth sensor and 2MP



macro camera, along with an 8MP front camera.

Samsung Galaxy A13 is available in three colours – Blue, Peach and

Black. It is available in two variants of 4GB/64GB and 6GB/128GB, at offer prices of Tk. 16,999/- and Tk. 20,999/- respectively.

## Google releases 'Switch to Android' app for iPhones: reports

Google has recently launched their much-awaited 'Switch to Android' app for iPhones, reports claim.

According to Google, this app will allow users to easily move contacts, photos, videos and calendar events to a new Android device from an existing iPhone.

This will make migrating to Android devices from iOS much easier, according to reports.

The app also includes features such as guiding how to set up a new device and turning off iMessage so important notifications are not missed.

Before the app can be used to transfer data, it will ask for a few permissions first. Only

afterwards can users use the iCloud service to move photos and contacts across devices.

While contacts and personal data can be transferred via this app, it does not allow transfer of apps, most likely due to third-party app limitations between iPhones and Android.

However, the app is currently unavailable in most countries outside the US. At the time of writing, Google has yet to officially announce the release of this app.

According to reports by TechCrunch, since April 11, the app was available for download via a direct link of the US version of the iPhone App Store.





# ENTRY-LEVEL JOBS: A BEGINNER'S GUIDE

AHMAD TOUSIF  
JAMI

Undergraduate students and fresh graduates are increasingly looking for entry-level jobs in recent times. Entry-level jobs, in simplest terms, are elementary positions in any organisation or industry. Such openings ideally require minimal education or experience from a model candidate. Answered below are some of the most frequent questions an employee may have when they first set foot in the job world as an applicant.

#### WHICH OPENING IS A FIT?

If the job position does not align with your interest, you will not enjoy the work, which

organisation in the longer run. Ideally, this should be someone eligible to learn from the job and receive hands-on guidance. "We do not necessarily expect an entry-level applicant to have extensive professional job experience," says Bishwamitra Chowdhury, entrepreneur, and Head of Products at a country-leading healthcare company. However, if you have had previous experience(s), what matters most is whether that experience provided meaningful lessons. "We want to know what you learned and your responsibilities in your previous workplace, or in any life event," adds Mr Bishwamitra.

not the best fit," adds Mr Bishwamitra.

#### HOW COMPETITIVE ARE ENTRY-LEVEL JOBS?

Previously only university graduates used to apply for entry-level jobs. But now, the competition has increased, given the recent trend of university freshers applying for new positions. Thus, the competition pool has grown, and jobs have become more competitive as well. For instance, a university student has to compete with individuals who have completed graduation and thus no longer have academic responsibilities. In addition, most entry-level jobs do not demand requirements for eligibility as an applicant, attracting even more job applications. As most job openings for graduates often require previous work experience, these entry-level jobs are even more critical to building their profile and gaining valuable exposure to the professional world.

#### WHAT DOES ONE LEARN FROM SUCH JOBS?

"Assuming you meet the minimum required competence level, your positive, proactive, and can-do attitude is often the single most important factor regarding how much you excel in the workspace," says Mr Aymanul. Moreover, these positions ideally offer bottom-up work experience. So they learn how to do the work on-ground and efficiently do those work. This also helps them lead a team because they know how work is done on a micro-level, alongside learning essential foundational skills for any job, including but not limited to essential professional communication, workplace customs, ethical practices, code of conduct, and more.

#### HOW TO LOOK FOR OPENINGS?

The most popular medium to find a job opening is social media platforms such as LinkedIn and Facebook. The employers also post job openings on their websites, so keeping an eye out will help you in the long run. Your networks often have these job openings through university career clubs, placement authorities and students groups. Recently, groups have been created specifically for job openings on Facebook, where entry-level job offers are often posted. In specific instances, some employers still give openings through print media such as newspapers or digital platforms such as bdjobs.com. However, just following employers' social handles and websites is adequate and convenient in most cases to find suitable openings for you.



will be an overall bad experience for you and everyone involved. "A job outside your personal field(s) of interest is not the best fit for you," says Aymanul Islam, Human Resource personnel at a country-leading financial institution. It is important to consider whether you will grow as an individual and develop yourself working in the position before signing up for a job opening.

#### IS EXPERIENCE REQUIRED TO GET THE JOB?

Entry-level positions, in most instances, require little to no professional work experience. Typically, these opportunities indicate that the company is searching for someone who has the potential to fit and contribute to their

#### SHOULD ONE STILL APPLY IF THE REQUIREMENTS DON'T MATCH?

Job descriptions are given so that the employer can find a candidate who is the closest match for that position. So, if a candidate does not match each of those criteria, it does not necessarily mean they are a potential match for the position. "If the job description matches roughly eighty percent with you, you are a close fit, and you should consider applying," says Mr Bishwamitra. It is a good idea to consider applying for a job if you fit most of the requirements and criteria. Don't hold yourself back. "However, if you do not match even half of the requirements, you are probably



**Building a stronger and safer nation for 70 years**

**Our victories are for the people**



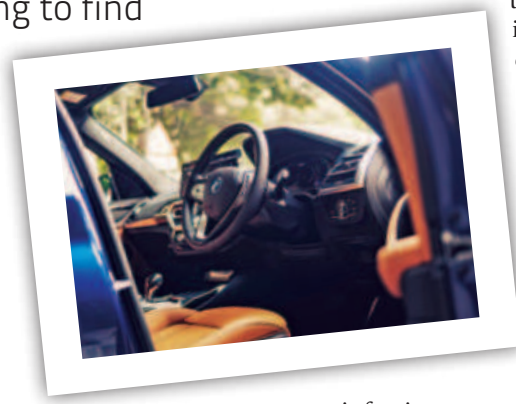


# TAKING THE 2022 BMW X3 OUT FOR A RIDE

ARFIN KAZI



The BMW X3 on paper seems like the complete package of a compact SUV. It is fast, reliable and quite comfortable to commute around the city or go on a cross country trip with. Even though the X3 is a mid-range offered by the German manufacturer, the amount of flamboyant options in the car is plenty. Keep reading to find out more.



The infotainment system supports wireless Apple CarPlay, AndroidAuto and

## DESIGN

The classic BMW grille shape and size have been made sharper. The car also contains a hidden front camera for driving aid. The overall design of the X3 is angular, with lines through the middle of the bonnet giving it that German 'Sport' SUV aura.

The housing is slimmer and wider compared to last year's model and also features new lighting components, including optional laser light detection. The rear fascia has also been re-iterated for the current generation as the car received redesigned tail LED lights and a dual exhaust system with no gimmicky fake outlets.

## INTERIOR

Jump inside the X3 and you will immediately be greeted with the big 10.4" infotainment touchscreen present in the middle of the centre console. The seats are soft, with Sensatec synthetic leather soft-touch trim pieces. The seats on the front are ten-ways adjustable including the bolsters on the side.

The infotainment system supports wireless Apple CarPlay, AndroidAuto and



are foldable as retractable at the front to increase boot space.

The boot in the BMW X3 is around 650L without the seats folded. But since our test vehicle was a plug-in hybrid version, there's a compromise of 100L because the batteries for the electric motor are stored at the back. Thus, the car has around 550L of storage space and around 1600L with the seats completely folded.

## DRIVING THE X3

Everything is well visible and the panoramic sunroof makes the experience even more comforting. The speedometer screen has also been upgraded to a completely digital gauge, where it shows various info about the car alongside the essentials.

The throttle response and the handling are

Amazon Alexa Integration. When it comes to audio, the X3 has a superb surround sound system with great low-end sound.

It is very spacious on the back, with ample headroom. There's also climate control alongside two USB-C ports. The rear seats well, being fully

great. It can accelerate from 0 to 100 in under 6.1 seconds. The car can also be driven under various modes which can help the driver either go fast or save the most fuel possible.

When you put the car on sport mode though, engine noise can be heard - not through the exhaust pipes but from the speakers. Apart from that, the regenerative braking is prominent in the X3. As soon as you lift your foot from the throttle, the regenerative braking takes over and automatically brakes the car. This does feel a bit restrictive but the car can take speed bumps easily. The car can also be driven in full- EV mode until 120 km/h.

## SPECIFICATIONS

The test car we had came with a 2L four-cylinder turbocharged hybrid system paired with an 8-speed gear, capable of 292 kW of power and 420 Nm of combined torque. It also came with

19" wheels with Pirelli Cinturato all-purpose summer tires. Test mule provided by Executive Motors, the only official BMW dealer in Bangladesh.

## VERDICT

The BMW X3 is a great entry-level luxury compact SUV. Driving the car feels great and the speakers are in a class of their own. The car would feel a bit better if the adaptive regenerative braking system can be turned off or at least decrease the intensity of the braking. But other than that, there are no complaints.

PHOTO CREDIT: AHBAAR MILKY



# Internet's greatest art war, and the fight to keep Bangladesh in it

How a small community of Bangladeshis on Reddit spent three sleepless nights defending the Bangladeshi flag on a massive open digital canvas

ZARIF FAIAZ

You probably missed it, but the internet just saw a melancholic end to one of its largest collaborative art projects. Reddit's r/place, a subreddit that is essentially a massive open digital canvas, came to an end on April 5, after returning for the first time since its debut in 2017.

r/place started as an April fool's experiment in 2017. It was termed a 'social experiment' that aimed to showcase the best and the worst of the internet. This year, it truly proved its purpose as over five million people on Reddit banded together for four days, creating, destroying, rebuilding and finally giving shape to a beautiful and chaotic tapestry of collective human emotions and experiences, expressed through pixels.

For four days, art was created, battles, if not full-scale wars, took place over pixel space, alliances were formed, vandalisms ran rampant and human stories were crafted patiently with nothing but pixels. Before the void came for them all and the canvas turned blank, the subreddit r/place represented the very nature of humankind in all its beauty and chaos.

## A tiny shade of red and green

I stumbled upon this digital tapestry on its final day, April 5, just before it was about to disappear. It was beautiful. A chaotic and beautiful graffiti made of pixels that had everything from Renaissance-style art to anti-war anarchic pieces. Amused and interested, I was ready to be awed by its scale and beauty, only to get my eyes stuck on a tiny corner of the canvas where a red and green shade was peeking from.

I zoomed in. It was a small Bangladeshi flag, complete with a royal Bengal tiger, a Shaheed Minar and a pixelated national mausoleum. 1971 and 'HOMI' were etched onto the flag, with Bangladesh written on it in Bengali.

## The final Bangladesh art in r/place

A simple thing. But I was reading up on r/place a little, and I had some idea of how painstakingly difficult it was to create and maintain a pixel space. Here's how it goes: on the r/place canvas, each user can only post a single coloured pixel, every five minutes. Meaning, to create a detailed art piece, it would take a large group of people to come together and keep at it for hours. That's the easy part.

The hardest part is to maintain that pixel space that they created. When over five million people come together on a single 1000x1000 canvas, it exposes human nature. Users invade your space, vandalise your art and everyone wants the largest space for themselves. They will overwrite your pixel and you have to stay on guard to quickly restore your pixel to keep

your art intact. You keep doing this until the project ends and whatever stands when the dust blows off, is your final piece. In the end, to survive, you either fight it out alone or form alliances with other users.

And so, I got curious. Did someone—or some group—really take all the trouble to make a Bangladeshi flag stand out in one of the internet's largest art projects? I had to find out.

## The r/bangladesh community

A quick cursory search on Facebook sniffed out two profiles that had posted about creating the Bangladesh art in r/place. I contacted them, and before I knew it, I found myself on a Discord server, speaking directly to a community of over 300 complete strangers who all came together and contributed in creating the Bangladesh piece in r/place—all eager to share their collective

vandalisers and invaders, patiently and quickly restoring lost pixels. When they saw opportunities, they formed alliances with other communities.

## Diplomacy is the key

"Everyone wants to own their space and to expand it. That's how it is. Just like they do in real-life scenarios, we had to take cautious, diplomatic decisions if we all wanted to protect our pixel spaces and keep expanding them," said one of the members of the community.

Diplomatic channels or 'embassies' were created on Discord to establish diplomatic relationships with communities from other countries. And these diplomatic 'missions' paid off.

Communities from Singapore and Malaysia, among others, helped Bangladesh protect its space from other invaders until the end of the project. In

created and even more, were vandalised, statements and counter statements were made, and unprecedented instances of international unity and mindless destructions were showcased.

r/place, in all its entirety, stood to showcase the best and the worst of the internet sub-culture. On one hand, it showcased the strength of alliance and friendship between communities. On another, it proved that some just want to watch the world burn. It also showed that art can be created in any form and shape (pixels, too).

But for the Bangladeshi community who upheld the country's flag on the internet's most talked-about canvas, it meant something more than all that. I asked them why it was so important that they spend sleepless nights over a pixelated Bangladesh flag on Reddit?

"We wanted to do something for the country. We wanted to showcase Bangladesh to the world. And we wanted to feel patriotic and proud," replied one of them.

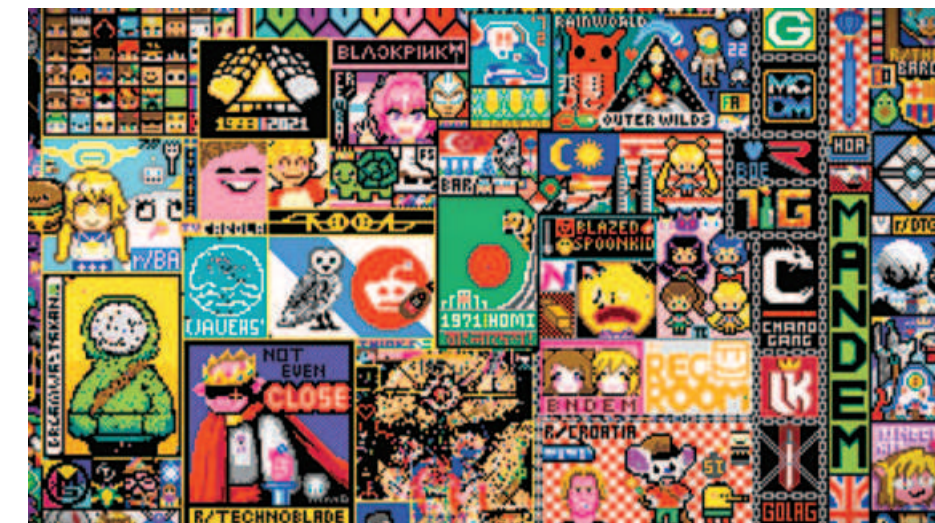
"When the canvas was turning blank, we all came online on the Discord server and we played our national anthem. I've heard the national anthem countless times but never before has it felt so personal. I had an ecstatic sense of accomplishment. I felt goosebumps. I'm sure we all did."

"This was the first time we realised the true meaning of the phrase—earning independence is easy, keeping it was the tough part."

When I was speaking to a few members who represented the entire community before writing this article, they insisted that I do not use their names in the quotes. They did not want any limelight. For this was not an achievement by any single person, but a "collective win", they told me. Out of respect, I kept it that way.

None of the members I spoke to would be older than your average college or university-going age. They are what you'd ideally call the 'hopeless Gen-Zs'. But an hour-long conversation with them had me wondering—who'd you rather back when it comes to exploring patriotic sentiments? Those who insist on feeding you patriotism in the form of radical nationalism? Or these 'Gen-Zs' who'd rather lose their sleep over a hopeful purpose? A purpose in the form of a statement that says Bangladesh matters. That Bangladesh will be seen and heard.

Nearly 400 people, all from different parts of the country, some from abroad, united by a single emotion of patriotism, came together over the course of four days to create that statement on the world's most chaotic canvas. And I, for one, will not be giving up on them.



story of passion, patriotism and commitment. This is that story.

It started randomly, they told me. Someone started filling out pixels in the colours of the Bangladesh flag and there was virtually no coordination. The first iteration was small and simple. But more importantly, pixels were being invaded by other groups or users faster than they could be restored. The very first flag was ultimately completely destroyed by an 'Among Us' community.

## r/place Bangladesh

So a Discord server was opened up where everyone could come together from the r/bangladesh subreddit and beyond, and then coordinate. It started with four to five people. By the time r/place ended, it was a community of nearly 400.

They all took turns in creating a new Bangladesh flag with all the elements inside it, one pixel at a time. They were constantly on guard to fend off

return, Bangladesh did the same. Like an unofficial tripartite treaty, for three days, the three countries formed a joint alliance on Reddit to help each other thrive. Near the end, they also formed a joint heart-shaped art to mark their alliance—a wholesome affair altogether.

A similar alliance was also formed with HOMI, a small North-America based gaming community. HOMI was generous in giving up its own space to Bangladesh and even helped the Bangladesh community pull off the final design of the artwork. In return, they were honoured with their name etched onto the final artwork.

## The best of the internet, and the worst of it

Over the course of four days, the r/place canvas went through significant changes and reshuffles. The chaotic beautiful tapestry changed its form over and over again before settling on a final form, right before the big erasure. Countless arts were





# XIAOMI REDMI NOTE 11

## The fabled "JATIO" phone?

REVIEWED BY: SHAHRIAR RAHMAN

Today we are going to share our take on the locally manufactured Xiaomi Redmi Note 11. As phone aficionados can attest, Note series of Xiaomi has been enjoying an inherent hype for the last several years now. Some reviewers have even dubbed them as 'JATIO' phone (national phone). However, the immediate predecessor of Note 11 had its fair share of complaints - online forums were flooded with issues regarding the display, the battery, the OS etc.

So, will the Redmi Note 11 be any different? Let's find out:

### THE DISPLAY

This is perhaps the best part of the phone - a vibrant and colour accurate display. The 6.43-inch Full HD+ display will fit in our palm easily while the AMOLED display will be able to dazzle you with 700nits of brightness. Most devices in this range usually offer an LCD panel but Xiaomi did not seem to have cut any corners here. The display felt a bit

smooth too, thanks to the 90Hz refresh rate. The one thing we wished was if Xiaomi only could go for narrower bezels for the screen.

### THE BUILD

The overall build quality of the phone is quite good. The matte finish, the back-camera housing and tightly wrapped buttons on the side reek a premium feel. The phone does not weigh much and can slip on your palm easily. The phone also offers IP53 rating which is indicative of its robust build.

### THE HARDWARE

The phone comes equipped with Qualcomm 680 chip and is paired with a 6GB RAM. This should be enough if this phone is your daily driver and if you are not into gaming. The phone also comes with a

massive 5,000 mAh battery which is bound to last you an entire workday. It also comes with 33W Pro fast charging.

However, competition has already incorporated features in similarly priced phones- so this is nothing exclusive to this particular phone.

The price point: The variant I am reviewing comes with 8GB RAM 128GB ROM which is priced at Tk. 18,999/-. This year the pricing is a bit extra-competitive as it is able to circumvent some taxes due to local manufacturing of the phone.

### THE CAMERA

Over the last few years we have been spoiled with great camera phones that will not put a dent in your wallet. Redmi Note 11's AI camera is not an exception in that regard. You

can expect to get a decent click every time. Night mode image was average and portrait mode offered some decent bokeh effect. In the past, we have seen many mid ranger's image quality deteriorate over time. Unfortunately, the device has not been made available for long enough time for us to make a conclusive remark.

### THE OS

Ah... Xiaomi's Achilles' heel. Xiaomi devices' performance has been plagued by jittery updates before. Xiaomi authority, however, has informed that this time, the updates are going to be bug-free and will not brick your phone.

After using the phone for nearly two weeks, I found it a great secondary phone for me. Although the phone might have cut a corner here and there, for the budget, this is a great phone to buy. Not sure if this going to be the next JATIO phone, but this device is certainly going to stir up the competition.





# 6 LOCAL SMARTPHONES under Tk. 25K /-

NAVID HOSSAIN

The dilemma of buying a phone is everlasting. Sometimes, the harsh reality is that we cannot always afford flagships. But don't let that dishearten you. There are plenty of local smartphones available that are available even within an affordable budget. Check out our top picks for 6 local smartphones under Tk. 25k that will cover all your needs quite adequately. Please note that prices can vary across different stores.



### Samsung Galaxy M32

Ranging from uber-expensive flagship phones to budget-friendly ones, Samsung is a popular brand in the local market. The M32 features a 6.4-inch super AMOLED display and a dual SIM card capacity. It operates on Android 11 or One UI Core 3.1 OS. The internal memory on this is 64GB internal with 4GB RAM, 128GB internal with 4GB RAM and 128GB internal with 6GB RAM. But the best part is, it still has a dedicated memory card slot for expanding the memory externally. The M32 is armed with 4 main cameras ranging from 64 MP, 8 MP, 2 MP and 2 MP, with a 20 MP selfie camera. That's not all, as it also comes with a 3.5 mm audio jack.

**Price:** From Tk. 23,999/-

**Available at:** Samsung Official Retail Shops, RIO International, Al-Islam Gadget Zone



### Infinix Note 11 Pro

Amidst the Vivos, the Oppos and the Xiaomis, one brand that got the limelight would be Infinix. The Note 11 Pro comes with a huge 6.9-inch IPS LCD screen. Operating on Android 11 and XOS 10, this phone has an internal storage of 128GB and 8GB of RAM. The storage space can be extended with a memory card as it has a dedicated memory card slot. The triple camera set-up of 64 MP, 13 MP and 2 MP also allows a video recording of 1440p at 30 FPS. The selfie camera is basic with 16MP and can record 1080p videos at 30 FPS.

**Price:** Tk. 22,000/-

**Available at:** Cell Tech BD, Gadget and Gadget

### Xiaomi Redmi Note 11

Xiaomi, the locally renowned brand produces some of the most regularly used smartphones. The 6.4-inch Redmi Note 11 comes with Active Matrix Organic Light-Emitting Diodes and AMOLED display. With either Android 11 or Mi User Interface, MIUI 13, it harbours 6 GB RAM and 128 GB internal storage, it can also be extended with its dedicated memory card slot. With triple front cameras of 50 MP, 8 MP ultra-wide and 2 MP Macro, it can shoot stunning 1080p cinematic videos at 30 FPS. The single selfie camera upfront features a 13 MP camera that can also video shoot 1080p at 30 FPS.

**Price:** Tk. 18,500/-

**Available at:** Xiaomi Official Stores, Cell Tech BD, RIO International, Phonomania



### Realme 8 5G

The Realme 8 5G has In-Plane Switching Liquid Crystal Display, IPS LCD screen and a 6.4-inch display. It runs on Android 11 and Realme UI 2.0. This phone has a triple camera set-up with 48 MP, 2 MP and 2 MP. With a video shooting capacity of 1080p at 30 FPS, it also features a 16 MP selfie camera. The 5G technology makes the internet browsing experience future-ready too.

**Price:** From Tk. 22,000/-

**Available at:** Cell Tech BD, RIO International, Sumash Tech



### Vivo Y33s

Last but not the least, Vivo Y33s. Featuring a 6.5-inch Liquid Crystal Diode, LCD screen, it comes with dual SIM card slots. The OS in this is Android 11 or Funtouch 11.1. The triple cameras on the Y33s are of 50 MP, 2 MP and 2 MP. The selfie camera on this is 16 MP. It comes with 64 GB internal memory with 4 GB RAM, 128GB with 4GB RAM or 128 GB with 8 GB RAM. This is expandable as the phone has a dedicated slot for memory cards.

**Price:** From Tk. 19,200/-

**Available at:** Vivo Official Brand Shops, RIO International



### Oppo A76

The Oppo A76 is an up-to-the-mark budget-friendly smartphone. It has a 6.56-inch screen with an IPS LCD display. It operates on Android 11 and ColorOS 11 having internal memory of 128 GB and a RAM of 4 or 8 GB. The storage space can be extended with a memory card as it has a dedicated memory card slot. Now, in this day of phones having 3 or 4 cameras with the incrementing number, the Oppo A76 has a dual camera, one 13 MP and the other 2 MP. The selfie camera is 8MP. This phone also comes with a 3.5mm audio jack.

**Price:** Tk. 19,990/-

**Available at:** Oppo Official Stores, Gadget & Gear Bangladesh





# A Bangladeshi youth on the mission to provide low-cost robotic hands

JINAT JAHAN KHAN

When an arm is lost or amputated, an artificial hand can help in the rehabilitation of a person. However, such robotic hands come with a huge expenditure. Joy Barua Lablu, a Bangladeshi youth has a mission to provide such hands at an affordable price to all those who are in need.

Joy Barua has previously developed robotic hands that can do household chores or risky missions. In 2020, he aimed to develop bionic prosthetic hands for people with no limbs. After almost a year of research and experiments, Joy Barua initiated his first trial on an individual without a hand from Bandarban in September 2021, receiving immense success. Now he has over 200 orders in hand among which some are from India, Malaysia and the US. He has already sent his first international order to Turkey.

## How does a robotic hand function?

Before determining what kind of a bionic prosthetic hand a person needs, Joy Barua performs electromyography (EMG) and other essential tests. Each hand is exclusively customised for each individual. There are four kinds of robotic hands in his workshop.

## EMG-control robotic hand

The first type of hand is the 'EMG-control robotic hand' if the EMG test is positive. This is for those who do not have a limb or hands but are able to control robotic hands with neuro-linked assistance. This basically works with the help of nerve signals stemming from the user's brain.



## Auto self-control hand

Sometimes, the nerves of the hands do not work actively and the EMG test is not successful, making the EMG-control robotic hand an unideal solution in specific scenarios. In such cases, patients are provided with auto self-control hands. These work with the aid of an auto control switch which has nothing to do with nerves.

There can be two kinds of auto self-control hands. The first one is the voice-control hand that can be controlled by the voice of the user, a device made with the aid of voice recognition programming. As per the request of the user, the language can be set in English or Bangla. The other kind of auto self-control hand is the leg-control hand, which works through the movement of the owner's toes. When a person does not

have any hand, a small transmitter is set to his toes that provides a wireless signal through their movements to the robotic hand.

## Robotic hands for daily chores and risky missions

Besides these, there are two more types of robotic hands that Joy Barua makes. Robotics third hand is for those who have both their hands but need another for additional work while increasing efficiency. It can be used by setting it up on the back of a person with the help of a belt. Another one named wireless robotic hand is for those who are involved in any kind of dangerous work, such as firefighting. A transmitter remains connected to the owner of the hand that copies his movement and sends signals to the robotic hand, which works up to 800 metres away from the user.

## Possible price range

The cost of a bionic prosthetic hand can range from Tk. 30,000 to Tk. 1 lakh. For

people from low or lower-middle-class families, Lablu tries to provide prosthetic hands within Tk. 25,000 to 30,000 but these are without silicon covers. The cost would be at least Tk. T 40,000 to 50,000 to have silicon gloves with such hands, that provide both the look of a real hand and additional protection.

There are a total of 4 versions of bionic prosthetic hands upon which the price depends. Version one is for those who do not have palms, version two is for those who do not have hands above the palm, version 3 is for people with no hands from the elbow, and version 4 is for people with no hand parts at all. The higher the version, the higher the cost.

One of the barriers that Joy Barua faces is that the silicon covers of prosthetic limbs are not available in Bangladesh. They are exclusively imported from China due to which he is not able to complete a sufficient amount of orders in a month despite completing the main parts of these hands in time. Basically, 30% of the essentials need to be imported and 20% of them need to be developed exclusively in his workshop. As per Joy Barua, he could have completed his orders faster if all materials were available locally and enough support was provided.

For his works regarding different types of robotic hands, Joy Barua Lablu became the first runner-up in 'Abishkarer Khoje' by ESSAB in 2018 and was the district winner in NASA Space Apps Challenge 2019 from the Chittagong district. He also got the second position in the agriculture round of the 'Esho Robot Banai' TV show by Channel i. Besides that, he has also won several prizes in competitions organised at Chittagong University, science fairs and competitions organised locally in Chittagong and Hathazari.

us on /Sandalina

ঐতিহ্যের আর এক তাম্র আধুনিকতা  
ঠিক যেমন রূপচর্চায় আভিজাত্য মানেই

# অ্যান্ডালিনা

## সোপ

রূপচর্চায় আভিজাত্য...