

Heritage Institute of Technology

An aerial photograph of a modern architectural complex. The buildings are rectangular and feature green roofs. The complex is surrounded by lush greenery and a river. In the background, several tall skyscrapers are visible against a clear sky.

THE ROAD TO SUCCESS IS ALWAYS UNDER CONSTRUCTION

K-ONS TRUCTZ

2024



HERITAGE INSTITUTE OF TECHNOLOGY

WHERE LEARNING IS AN INTERACTIVE
EVOLUTIONARY PROCESS.

AN AUTONOMOUS INSTITUTION AFFILIATED TO MAKAUT, WEST BENGAL
(ACCREDITED WITH 'A' GRADE BY NAAC W.E.F
(12/07/2022))



Departmental E-Magazine

Presented By

**DEPARTMENT
OF CIVIL
ENGINEERING**

TABLE *of* CONTENTS

1. Vision & Mission

2. Message from The HoD's Desk

3. Special Message from Esteemed Faculty

4. Editor's Message

5. Magic of Words



6. Art Gallery

7. The World through Lens

8. Technical Events

9. Enjoyment Unleashed , Non-Technical Event

10. Stories of Achievement

11. Achievement in Sports

12. Beyond Limitation through Construction

VISION

DEVELOPING MOTIVATED, SKILLED AND HIGHLY COMPETENT CIVIL ENGINEERS TO EXCEL IN EDUCATION, RESEARCH, ENTREPRENEURSHIP AND TECHNOLOGICAL SERVICES, SO THAT THE DEPARTMENT AS WELL AS THE INSTITUTE WILL BE RECOGNIZED HIGH IN A GLOBAL SCENARIO.

MISSION

TO EMPOWER THE STUDENTS WITH BROAD AND IN-DEPTH KNOWLEDGE IN CIVIL ENGINEERING FUNDAMENTALS AND THEIR APPLICATIONS IN PRACTICAL AS WELL AS PROFESSIONAL FIELDS TO MEET SOCIO-ECONOMIC CHALLENGES. TO EDUCATE THE STUDENTS IN THE LATEST TECHNOLOGIES IN CIVIL ENGINEERING, IMBIBE IN THEM HUMAN VALUES, SELF- CONFIDENCE, TEAM WORK AND INDEPENDENT THINKING IN SOLVING DIVERSE PROBLEMS IN THE RELATED FIELD SO THAT THEY CAN SERVE THE SOCIETY. TO ACHIEVE INTERNATIONAL RECOGNITION BY DEVELOPING PROFESSIONAL CIVIL ENGINEERS, OFFERING CONTINUING EDUCATION AND INTERACTING WITH INDUSTRIES BY EMPHASIZING RESEARCH AND DEVELOPMENT.

FROM THE HoD'S DESK



I am glad that a departmental magazine “K-onstructz” has been published for all. I must appreciate all the students and the faculty members who worked tirelessly and within a tight time-frame to achieve this.

This magazine will serve as a platform for all the students of CE department to show their skills in literacy, poetry, innovation and research ideas. The staff will contribute to make it more interesting in terms of emerging technologies and lateral developments. I am sure it will be everyone’s delight.

PROF. (DR.) TAPAS SADHU (HoD),
DEPARTMENT OF CIVIL ENGINEERING

SPECIAL MESSAGE FROM ESTEEMED FACULTY



Prof. (Dr.) Subha Sankar Chowdhury
(Departmental Coordinator)

I would acknowledge the students from our department, who will become Civil Engineers for solving different problems of the world. They will come up with new ideas and create new technologies to make our lives better. They will make a significant impact on our society by building the infrastructure that we rely on, such as roads, bridges, buildings, tunnels etc. and thus, they will develop our society and way of life. I know that you can do this very well. All the best to my dear students.



Prof. (Dr.) Puja Basu Chaudhuri

I would appreciate the initiative taken by our Civil Engineering Department and especially which cannot be fulfilled without help of our beloved students. Thank you the team for your enormous effort. Hope we can publish many more e-magazines in future with help of you all. Best wishes.



Prof. Saurav Kar

Certainly I would say this is one of the greatest initiatives taken by our department. I whole heartedly thank the total team of students and all the faculty members of our department.

THE EDITORS

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2nd YEAR



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2nd YEAR



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1st YEAR



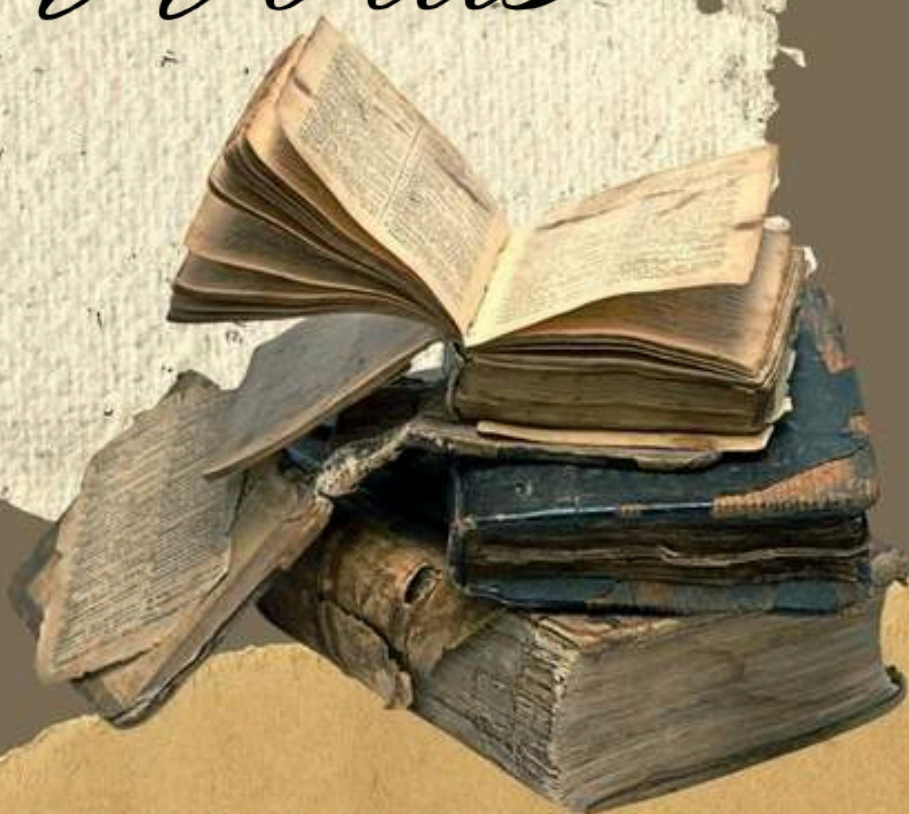
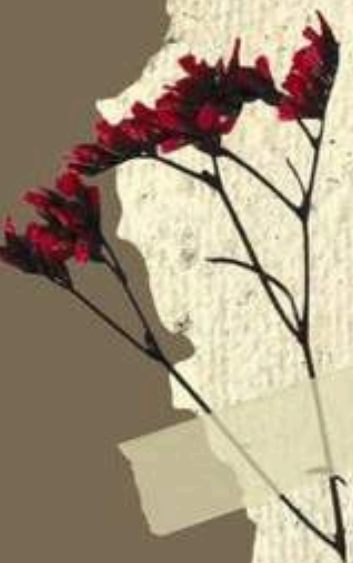
MEGH DEB
1st YEAR

Editors Message

Dear Readers,
It gives us immense joy and satisfaction to finally introduce our very own Civil Engineering Department's E-magazine "K-ONSTRUCTZ". Just like the Gods and the Asuras churned the ocean of milk to extract the nectar, we have tried to churn out the creativity from our department. The best thing about this magazine is that it represents the creative side of HITK students to a fair degree something that we think we all need to reconnect with. It includes report, poem, photography and much other stuff. We hope you enjoy reading the magazine. Any suggestions or criticisms will be most welcome.

Thank You. Stay safe, Stay Happy

*The
Magic
of Words*



জীবন খেলা

জীবনের প্রাপ্তি-অপ্রাপ্তি সব অতীতে লুকায়,
স্বপ্নেরা সম্ভাবনা সৃষ্টি করে, অতীতে ছড়ায়।
সময়ের নীরব পাখি, অসময়ে গান গায়,
আগামীর কাছে, পথের নির্দেশ করে যায়।
সমৃদ্ধির খোঁজে, আজ সব হৃদয়ে হারায়,
স্বপ্নের মধ্যে সবাই আজ, নতুন আকাঙ্ক্ষা চায়।

চলার পথ যখন অতীত অজানায় হারায়,
স্বপ্নের সন্ধানে সবকিছু অবিচ্ছিন্ন হয়ে যায়।
আকাশ ছুঁয়ে, স্বপ্নেরা ঘুরে, মেঘের মোহনায়,
টাঁদের আলোয় স্বপ্ন সুধা, মোহে রূপান্তর হয়।
হৃদয়ে অপূর্ণতা, জীবন পাপের মোহ সৃষ্টি করে,
স্বপ্নের আশা, প্রত্যাশা, নীলিমায় হারিয়ে মরে।

অপ্রাপ্তির আবেগ যায় সব, মহাকাশে মিশে,
স্মৃতি গুলো জেগে ওঠে, অনুঘটক রূপী বিষে।
সময়ের গায়ে স্বপ্ন সৃষ্টি হয়ে আবার জেগে উঠে,
নতুন আলোর উজ্জ্বল দিশারা, নতুন স্বপ্নের ভেলা,
অপ্রাপ্তি অন্ধকারে ভাসে, ফিরে নতুন আলোর মেলা,
স্বপ্নের আকাশে উৎসব উঠে, এটাই জীবন খেলা।

আয়ুস্মান মজুমদার
তৃতীয় বর্ষ

বিপন্নতা

হঠাৎ করেই এলে ঝড়, মাথার ছাদ যায় উড়ে
পাকা বাড়ি নয় তাদের, ঘর যে তাদের কুঁড়ে।
সুরক্ষিত নয় যে তারা, জীবন যেন বিপন্ন
পরিস্থিতি এমনই তাদের, পায় না খেতে দুবেলা অন্ন।

শহরে থাকে না তারা, গ্রাম-গঞ্জে বাস
জীবন জীবিকা তাদের, শুধুই কেবল চাষ।
কতবারই বন্যা এসেছে, করেছে নির্মম ক্ষতি
পারেনি তারা ফলাতে ফসল, এই তাদের নিয়তি।

সন্ধ্যে হলেই বিপদ বাড়ে, অন্ধকার হয় গ্রাম
যুগের পরে যুগ কেটে যায়, পায় না তারা দাম।
আমরাই পারি তাদের প্রতি সাহায্যের হাত বাড়াতে,
বিপন্নতা মুছে ফেলে হবে মানুষের পাশে দাড়াতে।

রুপঙ্কর চক্রবর্তী
তৃতীয়বর্ষ

POST-WORLD WAR ARCHITECTURE AS A MEANS OF AFFORDABLE HOUSING IN SOUTH-EAST ASIA

Riddhiman Santra , 3rd year

The very first thing which comes to one's mind when thinking of war is death and destruction, while they are the first thoughts there are several other interlinked consequences like property damage, crumbling economy and shortage of food and water. The First World War and the Second World War vastly crippled the modern developed nations in European and American subcontinent. The economy was in shambles and most people did not have much wealth left.

Before the World Wars most of the architecture were heavily over-engineered and ornamented, in a lot of styles of architecture form was given preference over the function. Grand styles such as Art Nouveau, Art Deco, Gothic etc. were used. The situation however changed completely after the World Wars. Massive destroyed cities needed to be rebuilt and a lot of people had little to no money. Thus, there was a need for something more affordable. Thus, I think in my opinion we can take inspirations from a few of the post-world war architectural styles which we can implement in developing countries in South-East Asia like India, Bangladesh, Indonesia, Sri Lanka etc.



Notre-Dame de Paris || A highly ornamented Gothic building

Most modern affordable mass housing projects in developing countries lack character and flair, the mass monotony of the buildings make them dull. Hence it is important to focus on architecture to bring more aesthetic values to affordable housing and make them a visual pleasure. Not all Post-World War architecture styles can be used for affordable housing, the main ones' which can be used are namely- Brutalism and Metabolism.



Mass housing project in Ranchi, India || The monotony of the buildings make it dull aesthetically

Brutalism. Brutalism is a style developed first in United Kingdom around 1950s, after the end of world war II. The main characteristic of Brutalism is that they show the bare building materials and use structural elements as aesthetics rather than going for ornamentation or decoration. It IS very easy to identify and has distinct visual palette. The term “Brutalism” is derived from the French words “beton brut” meaning raw concrete. Brutalism leaves concrete exposed after construction; another type of Brutalism is brick Brutalism which is basically leaving bricks exposed to create aesthetics.



“Buffalo City Court” by Pfohl, Roberts, and Biggie || Concrete Brutalism



IIM Ahmedabad by Louis Kahn || Brick Brutalism

There's already enough evidence to suggest that Brutalism can be used for affordable housing in South-East Asia. The first Prime Minister of India, Pandit Jawaharlal Nehru had a plan to make a 'dream city' (named Chandigarh) near Delhi. For this he appointed the erstwhile world-renowned Swiss architect and planner- Le Corbusier, who specialized in Brutalist buildings. It is important to note that during the 1950s India was heavily cash strapped and yet they could afford to construct the 'dream city', one of the key reasons they could do so was that cost of buildings were highly reduced due to the Brutalist architecture. Concrete which was the principal and almost the sole component of Le Corbusier's Brutalist structures, was very cheap to produce at the time. No additional finishing and ornamentation meant even more cost and time were saved. Thus, after many struggles Pandit Jawaharlal Nehru's dream of Chandigarh came to life, with much of the credit due to the affordability of Brutalist architecture.



High Court, Chandigarh by Le Corbusier

An interesting characteristic about Brutalism is the division of opinion among the architect community regarding it, the opinions are vastly polarizing. Another usage of Brutalism which highlights its affordability and low construction time is in several popular varsities of US, which use Brutalist buildings. Around 1950s there was a baby boom in US as the war had ended and general economy was heading towards stability. This resulted in a sudden influx of college students around 1970. Many campuses, the most renowned being Harvard resorted to Brutalist architecture for quick and cheap construction of additional campus buildings



Carpenter centre for the Visual Arts, Harvard University.

Hence with the above two examples, we have enough precedent to use Brutalist architecture in South East Asian countries. I must highlight that we should not take examples from Soviet era mass housing Brutalist buildings, instead we should look at more works of mainstream Brutalist architects like Le Corbusier, Louis Kahn, Paul Rudolph and Moshe Sadie. The '**Unité d'Habitation**' in France by Le Corbusier is the finest example of how Brutalism housing projects should be designed. Concrete structures do not require labours as skilled as Steel structures do, in South East Asian countries there's plenty of cheap labour along with production of cheap concrete.



Unité d'habitation - Le Corbusier

Metabolism. Metabolism is a post-War Japanese architecture style which drew inspiration from organic biological growth. Just like Brutalism this prioritizes function over form. After the massive destruction Japan faced due to the atom bombs, it was time for them to revamp their economy. Mass migration to cities took place with buildings unable to handle the increased population. This resulted in Metabolism being founded by a group of young architects – Kiyonori Kikutake, Kisho Kurokawa, Fumihiko Maki and Noboru Kawazoe. The main idea was to have a “spine” of a building which would contain all the essential services while “parts” of a building referring to modular units being joined to the “spine” as and when required.



Kiyonori Kikutake's concept of metabolism architecture

Metabolism heavily inculcated the idea of mass production and use of pre-fabricated concrete through portable pre-fabricated modular houses. This would save several costs (especially labour) and give better quality, along with the flexibility to add or remove units. Thus, this proposal was appealing. Kisho Kurokawa's "Nakagin Capsule Tower" not only combined this modular inexpensive design but also gave an impressive aesthetic touch with organic ideas. The rent per day averaged just \$25 in "Nakagin Capsule Tower", which for a megapolis like Tokyo is very cheap and compared to hotels and dormitories it is way cheaper as well. We should re-inculcate this in South-East Asia where there's enough labour to manufacture pre-fabricated houses in factories.



Nakagin Capsule Tower by Kisho Kurokawa

Throughout history we have seen how Japanese culture remains in isolation from most of the world. A similar pattern unfortunately followed with Metabolism and it was not able to get widespread popularism globally like Brutalism did. Shipping container homes can be said to be the modern derivative of the erstwhile modular Metabolist structure. The cost of a fully furnished shipping container home can get as low as \$10,000, thus yet again proving an affordable solution in South-East Asian countries. However we must note that most shipping containers do not have good thermal performance.



Stow-Away Hotel by Doone Silver Kerr || Made by stacking shipping containers

A NIGHT BLED AND DIED IN MY ARMS

Tripti Ray , 2nd year

A CRIPPLED NIGHT RAN TOWARDS ME. I DID IT KIND AND
WELCOMED IT INSIDE. WE SPOKE OF WAR AND
BLOODSHED,

MINES DISGUISED AS SOLDIERS AND BULLETPROOF
AGONY ON DEAD NATIONS.

OUR SALAMS WORE BATTLE SCARS AS MEDALS, WE
COUNTED BURN MARKS ON OUR BODIES, PRAYED FOR THE
HOMES SHAHEED IN THE ENEMY LINES, PLUCKED THE
GUILT OF MURDERING DREAMS WILD GROWN UNDER OUR
SKIN, SALVAGED WHAT IS LEFT FROM THE RIVER OF SALTY
STREAMS AND WATERED BISMILLAHS SPROUTING AT THE
TIP OF OUR TONGUE.

MY FATHER AND I FOUGHT IN THE FRONTLINES. WE BOTH
TOOK THREE BULLETS TO THE CHEST.

POVERTY AND FICKLE HABITS BABA HAD MORE
CASUALTIES THAN ME.

ONE EACH FROM FORGETFULNESS, HIM AND A FUNERAL

FOR HIS SEVERED HONOUR HIS TABLE CHAIRED THREE
VACANT BODIES AND HIS BED

ACCOMMODATED TWO;

AS FOR MINE I BECAME POORLY DRESSED INMATE IN MY
OWN HOUSE, A STUBBORN FOSSIL REFUSING TO AGE NO
MORE THAN THE BLACKENED BLOOD IN MY MOUTH. BUT
TONIGHT THE NIGHT IS NOT A KILLER.

IT'S EYES ARE OF A HUMAN, IT'S HANDS FOLDED IN GUILT,
SHOULDERS SLOUCHED BY HEAVY MISERY, REPEATING
SHAHADAT KALIMAH TO DEATH AND TAKE REBIRTH AS A
CHILD OF TENDERNESS IN THE NAME OF GOD.

THE TERROR OF MANDELA CATALOGUE

Asmita Das , 1st year

Date: 13.02.2023

Time: 11:16 pm

Hi, this is Aditya Pal, and this is my experience of a Mandela catalog, which left me in terror.

So yesterday I went for my tuition in the evening, and basically it was our last day, cause our boards already started. We were being invited by our tuition teacher, to have a short farewell, where we would sit and have a dinner together, and would share some really sweet memories. Little did I knew, I would come home, with such an intense terror in my head.

The food was shortly served, we comfortably settled ourselves. And five minutes, later among the munching sounds, Aratrika, my batch mate, , casually said –

" Are you guys up for a horror story ?".

We, turned our heads towards her and she slowly moved her eyes from the plates to us. We all nodded, "Yeah a better way to make this day memorable."

So she began,

Aratrika:

" I don't know how many of you do believe in Mandela effect, but recently I experienced something that gave me, goose bumps."

Another batch mate:

"What's a Mandela effect?"

Aratrika:

"I would come to it, but before, you should know what I experienced. Since a week our garage is being renovated, and it's the seventh time that room's appearance is being getting changed. I mean to everyone it might seem normal right. But who knows what's the fate says. – Huh, lol.

Anyways, so it was the lunch time and my family was setting the lunch table, and my mom send me to keep some stuffs in that room. So I got down, the workers were off for lunch, the room was vacant, the lights were on. But it was dirty cause of the plaster, and cement laying around, mirrors were rested on the walls, stack of chairs were at the corners.

Keeping the stuff, I started peeking into the cartoons, shortly I realised, the reflection on the mirror was having glitches. Frankly if it was any other room it wouldn't bother me, but it was that room for me, I always had a negative feeling for this room. If you ask me a reason I would go for, getting electrocuted when I was young.

I stood up from crouching, stared intensely to the mirror, walked close to it, looked thoroughly to my reflection, and raised my shaking sweaty hands towards the mirror. And-

Another batch mate:

And?

Aratrika:

And I felt the human skin, and not the glass. The moment I realised it was not the mirror. My heart started beating faster, my eyes filled with horror, I was gasping. I was so in shock, my voice got muted, I was breathing heavily. There was a series of things going on in my mind, what, how, I didn't had any answer. All I knew that I, have to keep an eye on that. The evil look in it's eyes, the smirk on it's face, and it slowly stepped out of the door. I hastily moved towards the door, but stumbled at the threshold. And I saw it staring at me from the stairs with the huge smile and, the eyes bulged out. I cannot let go of it, I started chasing it upstairs, it went inside our bedroom, and crawled under the bed, bending like a four footed creature, with that disgusting eerie face. My parents were just in the next room, but I couldn't speak a single word. I got nothing, but a broomstick lying near me, and started beating it on the floor, so that I could scare it out. I was terrified, but I had no other options. It was just staring into my eyes, and the moment it got a chance, it came out and ran down the stairs, hurried to that room. It was too swift, and it's feet were not even touching the stairs, as if it was jumping down the stairs without making any noise. I was chasing it, from behind, it got into the room, slammed the door, and turned off the lights. And I just-

Another batch mate:

And you entered the room? Again?

Aratrika:

And, no! No! I- I just closed the door from outside.

And went upstairs.

Me:

Thank god you didn't. But what exactly did happen? I mean what was it? And what is to do it with Mandela effect? I am so confused, right now. And I think everyone is.

Aratrika:

Ok, so now the explanation part. Basically it's moreover like an unsolved theory, or myth that there's something called the Mandela catalogue, which is basically about the parallel universe.

And it's said that whenever a room or a certain place undergoes multiple changes, the energy in that certain room gets disgusted and hence tries to connect with the parallel universe, which brings the evil energy. And our garage as I said had multiple renovations since I was young, hence the energy might have got activated. And as far I remember when I was in 5th standard I entered that room, at night, while it was undergoing slight construction, and got electrocuted, might be it was the beginning of everything. It's said that Mandela effect works more on children, because of their innocence. The more innocent the more timid, the better evil is created. Hence after that I never use to go in that room while it was being changed or renovated until that day. And I guess the moment I stepped inside that room, that thing from parallel universe came into existence.

This Mandela catalogue has another theory about this doppelganger, which says that these creatures, from parallel universe are stuck in between and whenever they get a chance they try to come into existence. They have certain characteristics, such as they lose energy when they are not in or around the room, so whenever they feel they are in danger, they just hurry back to that room. They are not too courageous, but if they find out that the victim is timid they will surely scare them out and kill them. They have a unique way of killing their victims. They get easily disappeared in the dark room, and if you try finding them they will surely get into your body and hence your real soul, will be connected to the parallel universe, and you could never get back to reality, you will be locked forever in between, and no one would ever know, cause they look exactly the same. So instead of running away and hiding, it's better to chase them.

Me:

Wow, you don't look like a person, doing full research on these things...

So what if someone actually get locked in there, how can you know? And why it just happened to you, I mean, the builders used to work right? And what about elders, they must have gone into that room alone.

Aratrika:

Builders where in groups, Mandela effect doesn't work on a group of energies, and it's more like a one time thing, once the evil of a person is created, it doesn't work on others.

Me:

Ah, about knowing, what's the way?

Aratrika:

Mm, ah I don't know, I mean, ah if haven't found any way, actually.

Me:

Oh, I mean there's must have been a solution to it, at least a way of escape. They are evil right, they must not be allowed to set free.

I took out my phone, opened YouTube, and searched

'Ways to find out it's your doppelganger.'

There were a lot of suggestions, I scrolled down, going through each video titles, and lastly I got few saying, 'How to make sure it's real or a doppelganger| Mandela effect'. I silently watched the video, and got some suggestions of asking questions which are not generally know by others except them.

If you ask me why I did it, I don't know, might be my intrusive feelings. I just wanted to make sure if she was ok.

Me:

God enough of these Mandela effect, can we guys just be happy that she's safe. Moreover tomorrow is valentine's day, are we not going to talk about that. And by the way, Aratrika what about my proposal?

Aratrika:

Umm, proposal...?

Me:

Yeah, we had a conversation, few days ago remember.

Aratrika:

Oh, yeah, that one. I gave it a thought, it would be really nice, you know. Ha ha.

Me:

Yes, it would be really nice.

At around 10:20 pm I reached home. While taking a warm bath, I tried to forget what I just learned, but I couldn't. The fear and terror was eating me up. I just lost her, I lost that timid, innocent girl, whom I wanted to protect for life. She was no more, she was locked, she disappeared, and died.

The moment Aratrika told she gave a thought to that proposal, I understood that she was not real. The real Aratrika would never reply to that answer, she was too shy, she would blush and giggle a little in her mind, and get back to dine. Cause the proposal which I talked about, was being my valentine.

AN ENGINEERING MARVEL SETS SAIL

Aishik Kayal , 2nd year

A very proud moment for the residents of Howrah as they finally get relief from the daily congestion. A new connection is made between Howrah and Kolkata through the stretch of Green Line under the River Hooghly. Beneath the bustling streets of Kolkata, a new chapter in urban transportation is being written by the AFCONS Infrastructure Limited. The City of Joy has become home to India's first underwater metro rail.

The East-West Metro corridor, stretching 10.8 km, snakes its way underground, connecting various parts of Kolkata. However, the crown jewel of this project lies beneath the mighty Hooghly River. A 520-meter stretch of the tracks dives deep, transforming the Howrah Maidan station into the deepest metro station in India at a staggering 30 meters below ground level.

Building an underwater tunnel presented a unique set of challenges for civil engineers. The powerful currents and immense hydrostatic pressure of the Hooghly demanded meticulous planning and innovative techniques. To ensure the tunnel's structural integrity, engineers likely employed a technique called Slurry Shield Tunneling (SST). In this method, a large cylindrical shield pushes prefabricated concrete segments forward, while a slurry of bentonite clay fills the space between the excavation face and the segments. This slurry not only supports the excavation but also acts as a lubricant for the shield's movement.

Another crucial aspect of underwater tunnel construction is maintaining watertightness. Waterproofing membranes and segment gaskets likely play a vital role in preventing water ingress. Additionally, sophisticated monitoring systems would be constantly tracking water pressure, ground movement, and any potential leaks within the tunnel.

The Kolkata underwater metro isn't just about the tunnel itself. The entry and exit points from the riverbed to the stations on either side presented significant challenges. These transitions likely involved the construction of diaphragm walls, deep excavations with temporary support structures, and meticulous backfilling to ensure stability.

For decades, the Hooghly River has served as a natural barrier, creating bottlenecks and frustrating commutes between the eastern and western halves of the city. The underwater metro slices through this barrier, offering a fast, reliable, and congestion-free travel option. Travel times between Howrah and Sealdah, previously stretching to an hour and a half by road, are expected to plummet to a mere 40 minutes. This translates to significant savings in time and improved quality of life for countless commuters. The impact extends beyond daily commuters.

The metro serves as a vital link for businesses and industries on either side of the river, fostering economic growth and collaboration. Additionally, it is expected to significantly reduce traffic congestion on Kolkata's bridges, easing the burden on the city's existing infrastructure.

It has also captured the imagination of tourists. The opportunity to travel beneath the Hooghly River adds a unique dimension to Kolkata's vibrant tourism scene. Visitors are flocking to the city to experience this engineering marvel firsthand, bringing a welcome boost to the local economy. It is more than just a mode of transport; it's a symbol of a city on the move. It represents the triumph of human ingenuity over logistical hurdles, paving the way for a more efficient, connected, and vibrant Kolkata. As the city dives deep with this innovative project, it sets sail towards a future brimming with possibilities.

ARTIFICIAL INTELLIGENCE & CIVIL ENGINEERING

Megh Deb , 1st year

Artificial Intelligence (AI) is revolutionizing the field of civil engineering, bringing about significant advancements in efficiency, accuracy, and innovation. AI technologies, including machine learning, neural networks, and data analytics, are transforming traditional practices in planning, design, construction, and maintenance of infrastructure. In the design phase, AI algorithms can analyze vast amounts of data to optimize structural designs, ensuring safety and cost-effectiveness while adhering to regulatory standards. For instance, AI-driven design tools can simulate various scenarios, predicting how buildings will respond to different environmental conditions, thereby enhancing resilience and sustainability.

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Furthermore, AI enhances project management by providing advanced tools for scheduling, resource allocation, and risk management. Machine learning algorithms can analyze past project data to predict potential delays and cost overruns, enabling more accurate project planning and execution. In smart city development, AI is integral to creating interconnected systems that improve urban living through efficient traffic management, energy usage, and public safety.

AI also plays a crucial role in environmental engineering within the civil sector. By utilizing AI for environmental impact assessments, engineers can better understand and mitigate the effects of construction on ecosystems, ensuring more sustainable practices. Additionally, AI models are instrumental in climate change adaptation strategies, helping engineers design infrastructure that can withstand extreme weather events and rising sea levels.

After a brief discussion on AI and Civil Engineering , I have a small but deep question to all future civil engineers :

**WILL AI TAKE OVER THE FIELD
OF CIVIL ENGINEERING IN
NEAR FUTURE?**

AWAKENING HORIZONS

Tripti Ray , 2nd year

IN THE EARLY GREY BEFORE DAWN
OUT OF THE SWIRLING SHADOWS, IT SOUNDS
THE FIRST BIRDSONG
COURAGEOUSLY ALONE
ANSWERED BY ONE, THEN TWO
AS THE CLOUD-TREADERS STIR
CALLING EACH OTHER FROM SLUMBER TO PERFORM THEIR
SCARED TASK
WINGED PRIESTESS OF THE LIGHT
CONVENING IN SHROUDED TREETOPS, THEY SEND
THEIR BRAVE NOTES INTO THE GLOOM
IN AUDACIOUS DEFIANCE OF THE WAVERING
DARKNESS,
STARKLY CONTRASTING WITH BLANK WINDOWS
AND BLACKENED ROOFS
THE SOUND SHIMMERS BRIGHTLY
A BEACON SIGNALING THE EDGE OF THE NIGHT'S
TEMPESTUOUS SEA
A BENEDICTION FOR SHATTERED SOUL WHO LIES
STILL SLEEPLESS
THEY DO NOT WAIT FOR THE DAY,
BUT SING, SERENE, IN HOPE OF IT
SONGS AT ONCE AS ANCIENT AS THE MOUNTAINS AS
NEW AS THE INFANT MORNING
WATERING THE EARTH LIKE DEW
INFUSED WITH THE SPLENDOR OF A THOUSAND SUN
AND THE GENTLE WARMTH OF ONE IMPISH RAY
THEIR CADENCE CALLS OUR STAR FROM IT'S
WANDERING ACROSS OCEANS AND LANDS
TO SEND IT'S GAZE UPON US ONCE MORE
WHEN ATLEAST THEY BEHOLD IT'S BEAMING FACE
THEY SING A LOVE SONG TO IT'S RADIANCE.

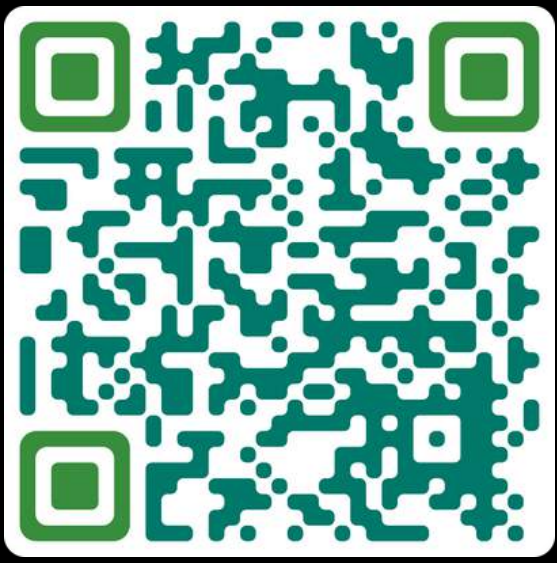


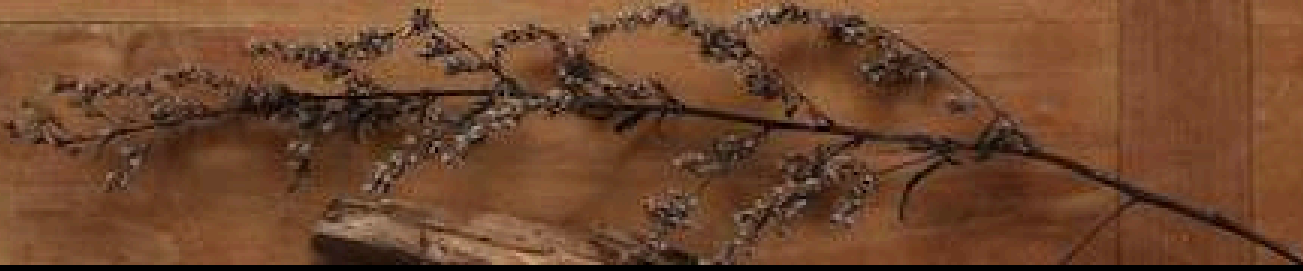
Art Gallery



2023-2027

Suchana Maity





2021-2025

Ujjwal Singh



The World through Lens



2020-2024

Sattwik Mondal





2023-2027

Debasmita Kayal





2023-2027

Subhajyoti
Dutta



2023-2027
Sagnik
Bhattacharya





2023-2027

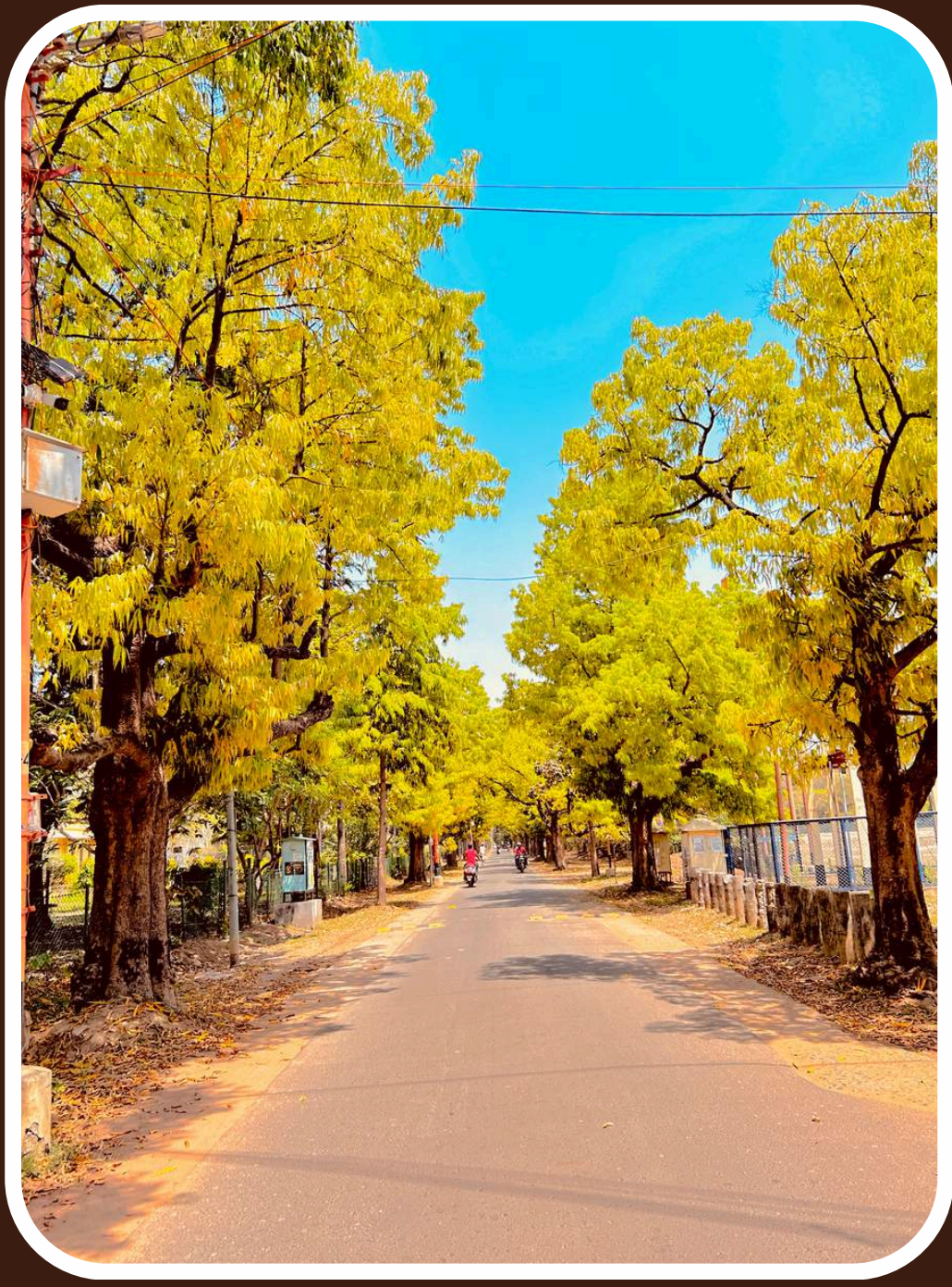
Megh Deb





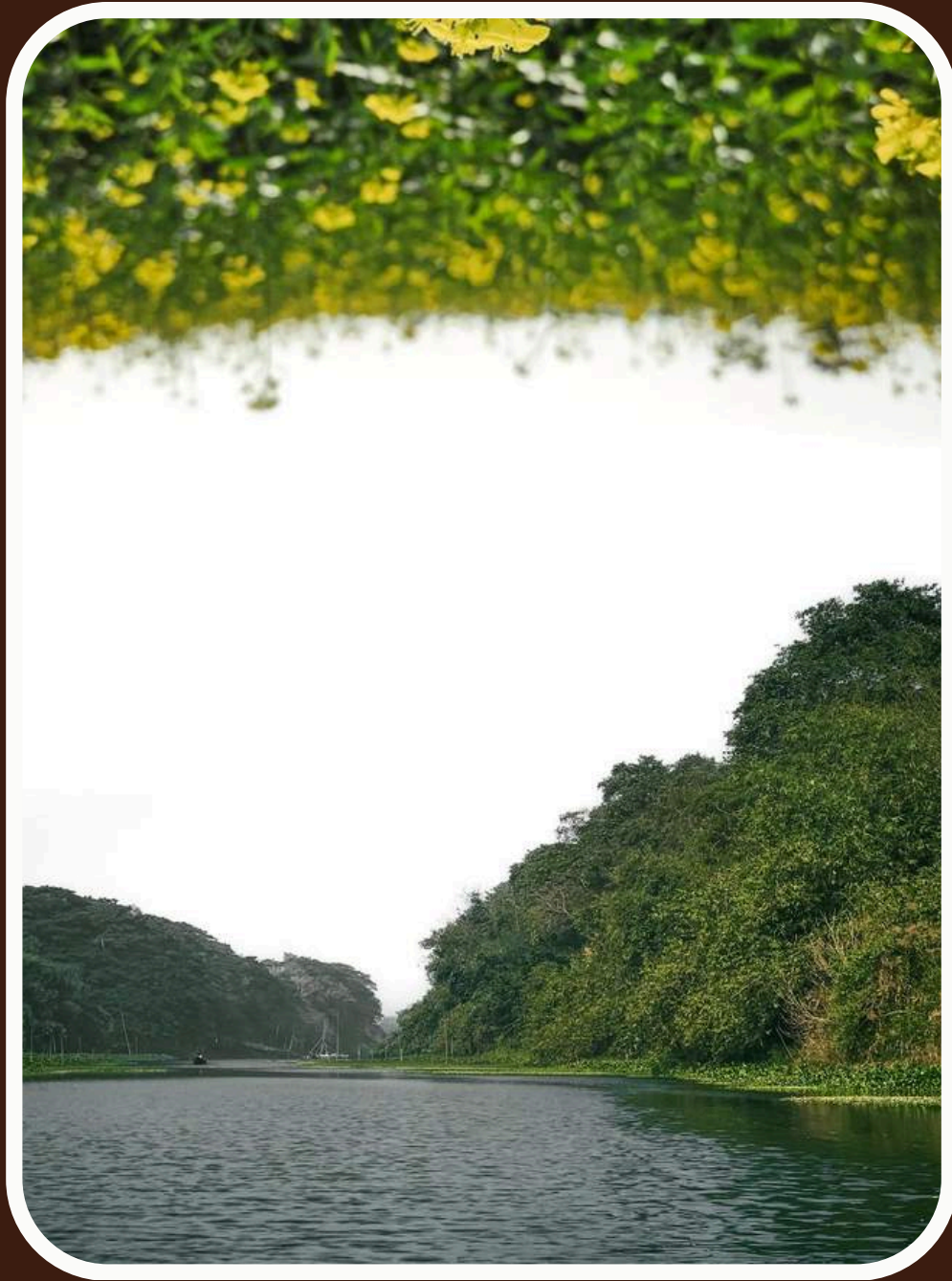
2022-2026
Nakshatra
Das





2022-2026

Nisha Mukherjee



2020-2024

Aritra Paul



Technical Events

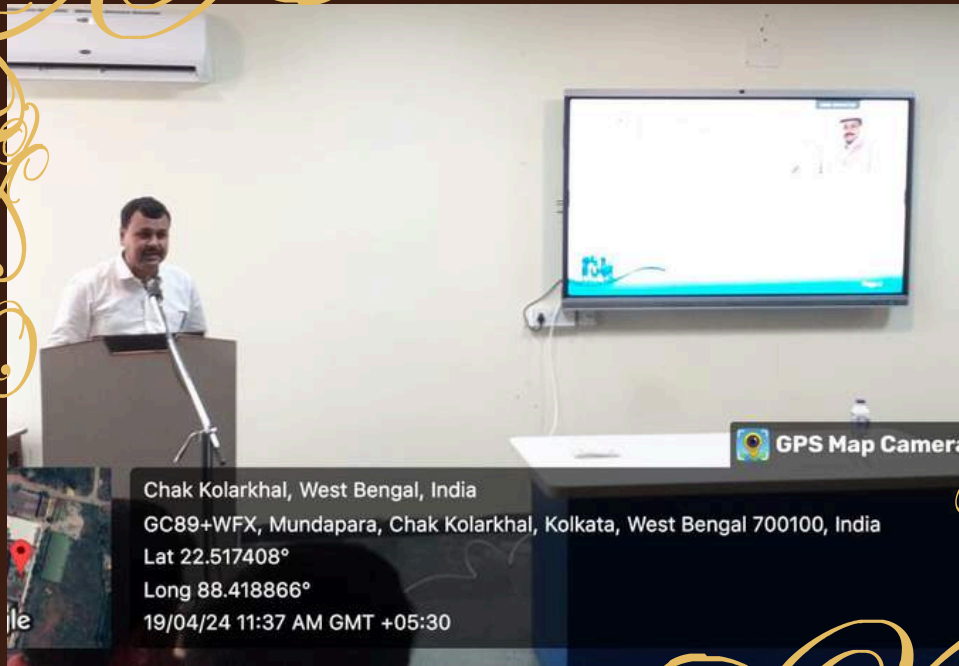
A New Learning Endeavour



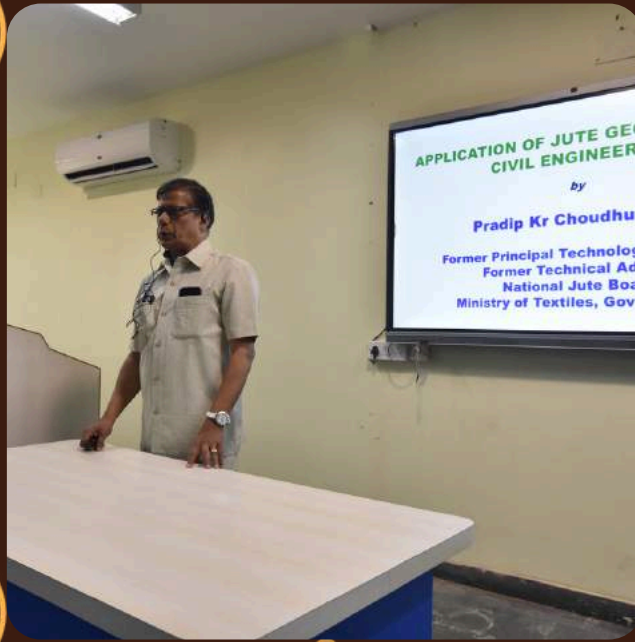
TECHNICAL TALKS



My Story- Motivational Session by Successful Innovators.- Speaker Mr. Mitranjan Ganguly, Managing Partner and Technical Head at G.D. Construction & Co.

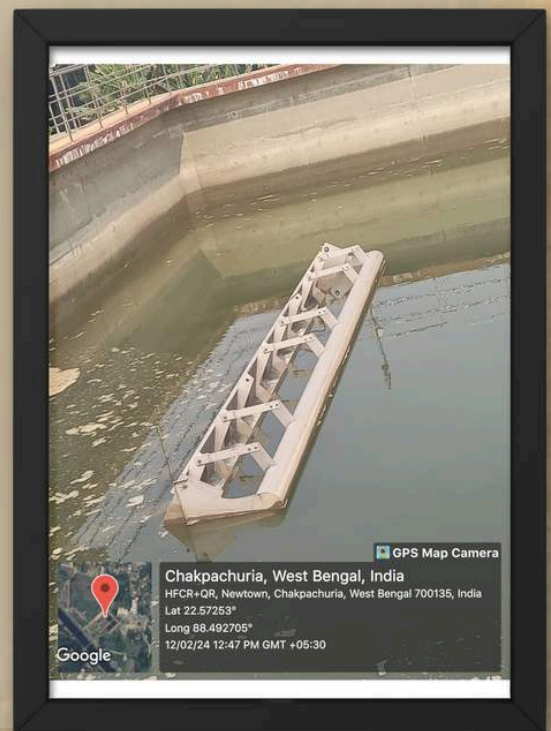
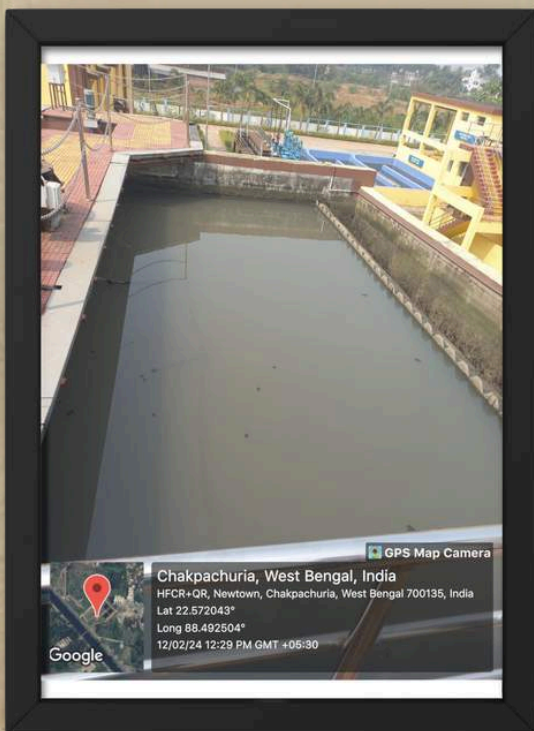
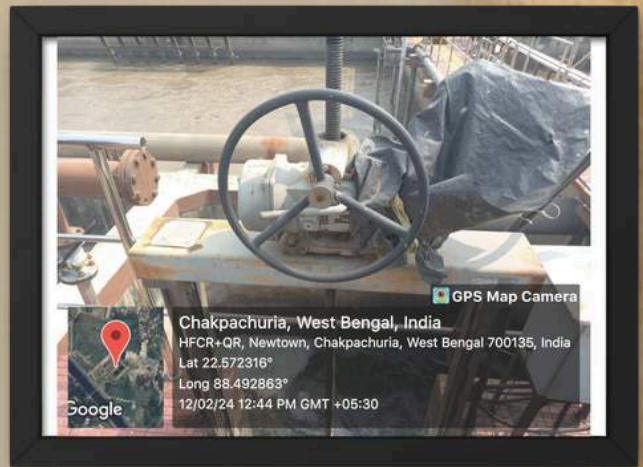


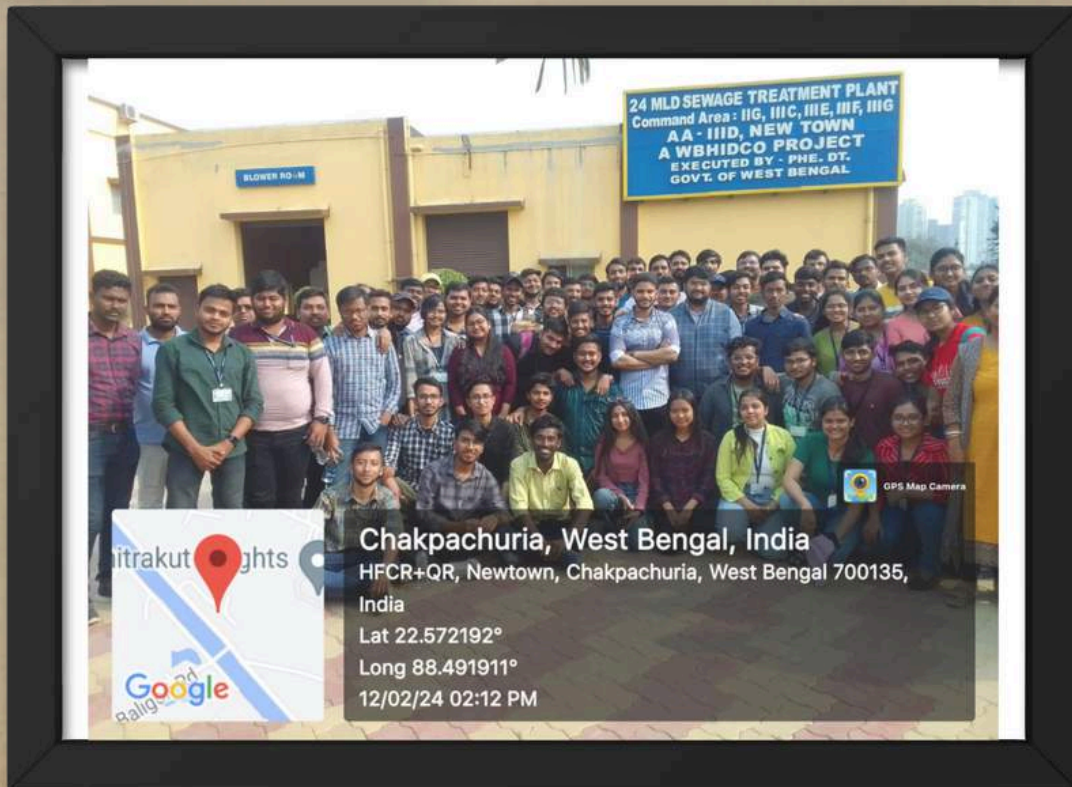
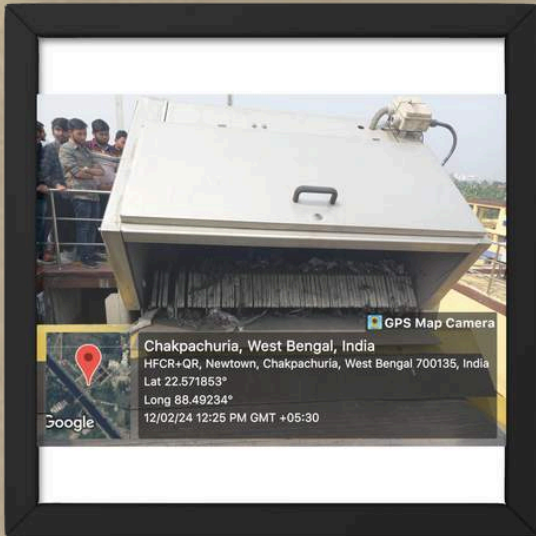
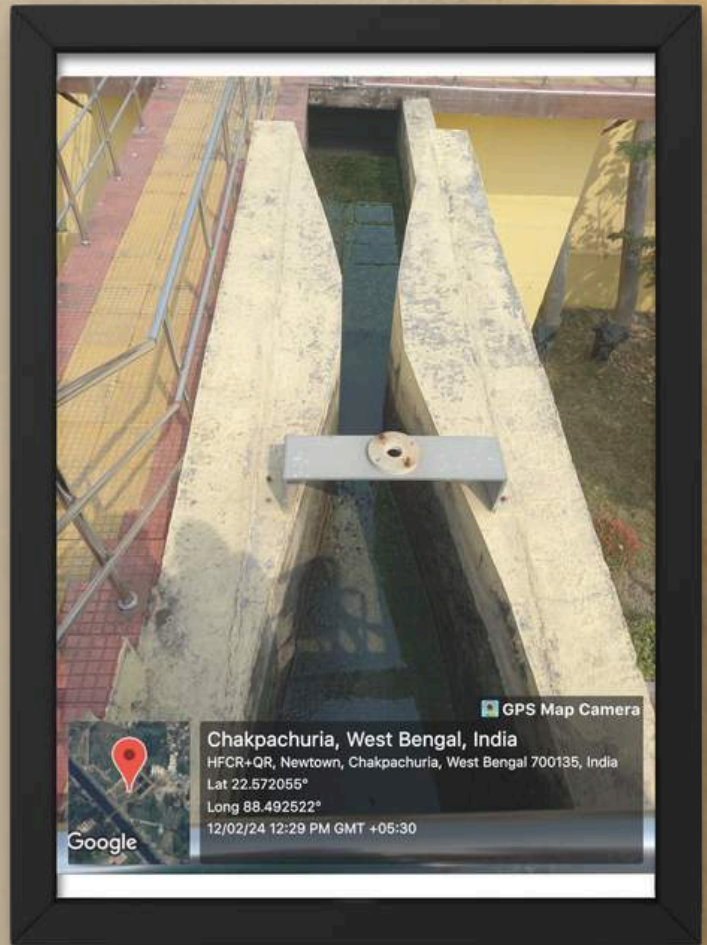
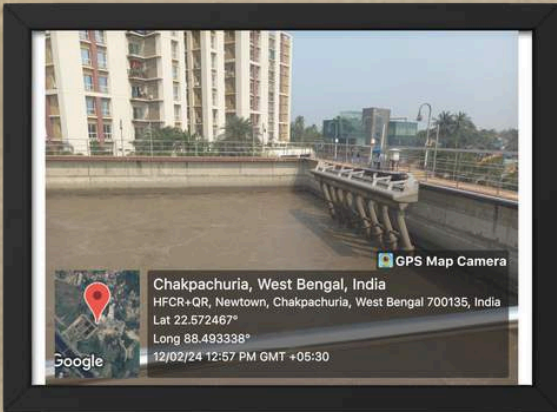
Tunnel Engineering in Metro Railway Construction by Mr. Chiranjib Sarkar, Principle Engineer - GEOCONSULT India Pvt. Ltd. Vice Chairperson - TAIYM (Tunneling Association of India Young Member Group)



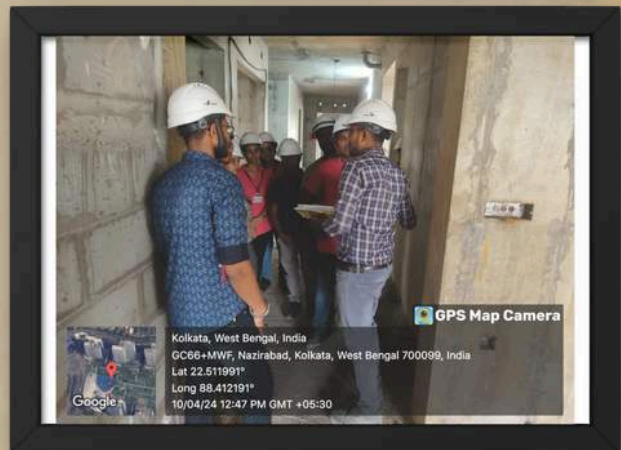
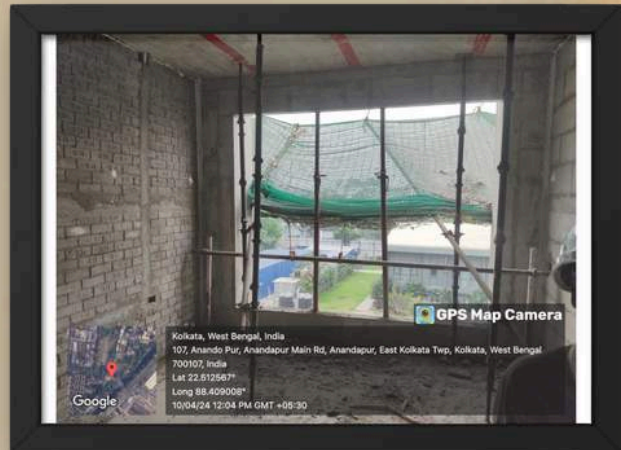
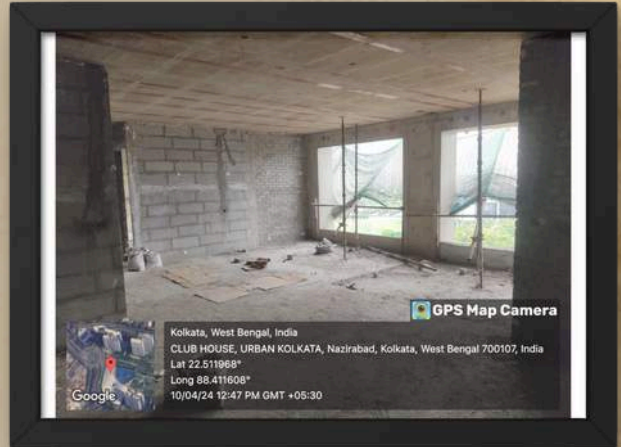
Application of Jute Geotextiles in Civil Engineering by Pradip Kr. Choudhury

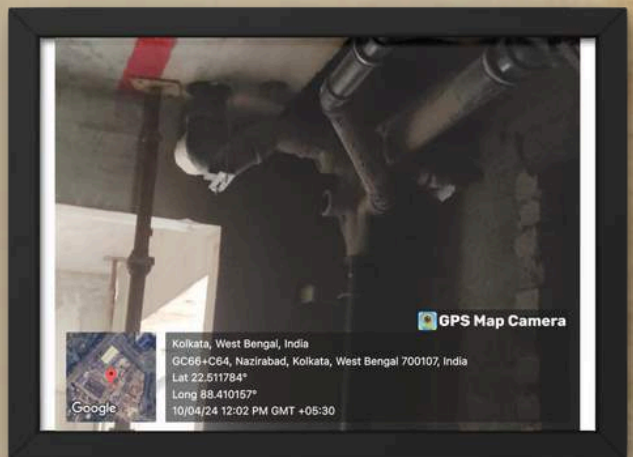
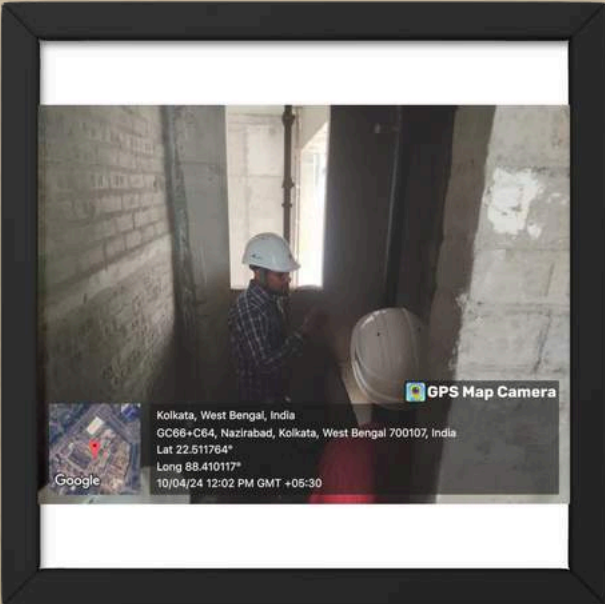
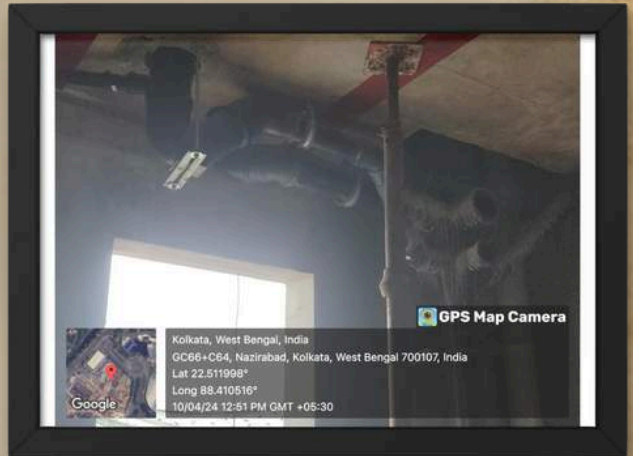
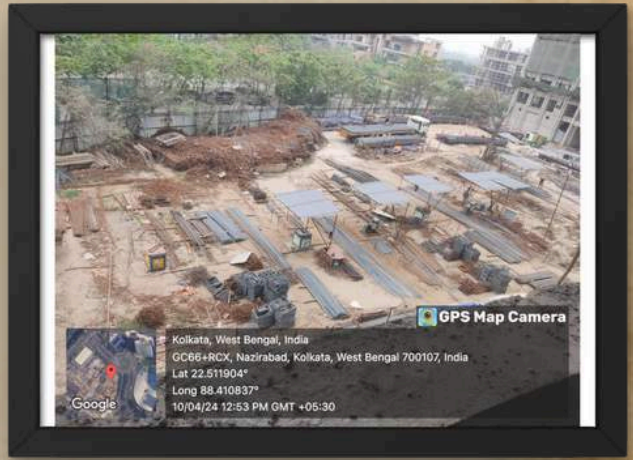
SITE VISIT AT 24 MLD SEWAGE TREATMENT PLANT





SITE VISIT AT URBANA







ENJOYMENT UNLEASHED

Non-Technical Event



Farewell Party



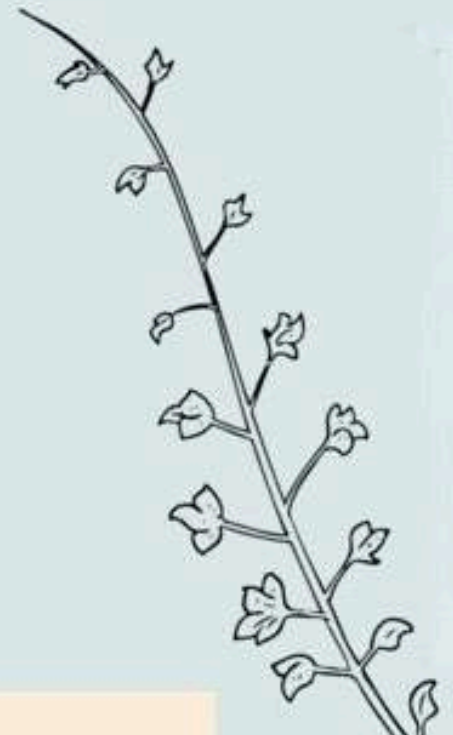
The
Stories of
Achievements



One step closer for the formation of centre of excellence, through the MoU signing between Ultratech and Dept. of Civil Engineering, HITK



**Namrata Sarkar &
Riddhiman Santra
(All 2021-2025) became
the joint winners of
WPD (World Plumbing Day)
presentation competition,
hosted
by Indian Plumbing
Association Kolkata
Chapter**





Sudhir Kr. Sharma, Piyush Raj & Rupam Bhadra (All 2022-26) became the winners of Bridge The Gap ; hosted by Jadavpur University (Srijan - 2024)

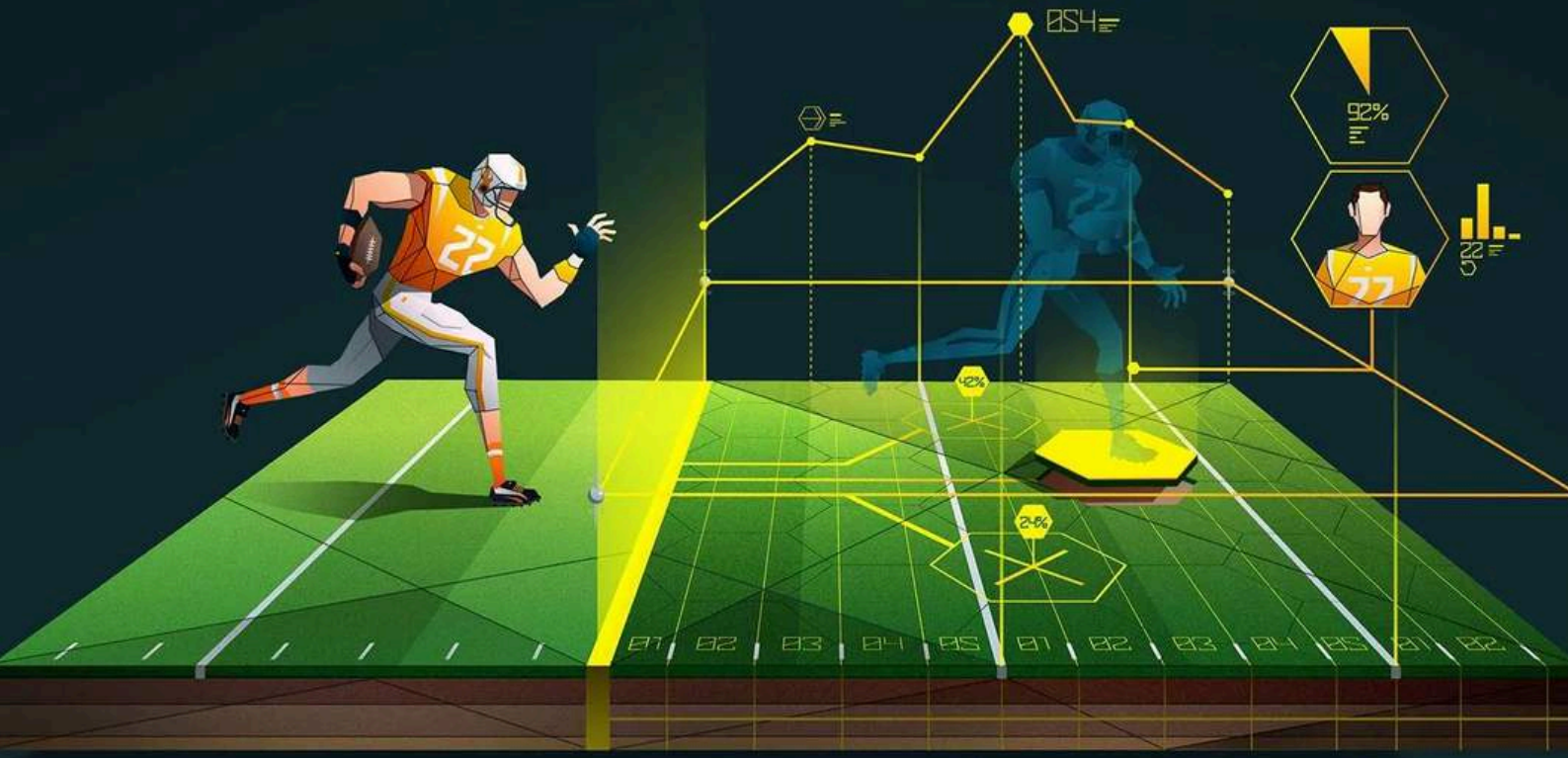


Aishik Kayal (2022-26) and three students of JGEC (Jalpaiguri Government Engineering College), Abir Ganguly, Sayan Sharma, Barunendra Ghosh (within the same team) became the 1st runner up of CENEX-2024 (Civil Engineering National Exhibition) with guidance of Prof. Saurav Kar, hosted by IIT Bombay (AAKAAR - 2024)





**Megh Deb (2023-2027)
became the 1st runner up
of Pirhana Tank, organized
by Heritage Business
School, AICTE & IQAC
Heritage Institute of
Technology
(National E-Summit-2024)**



ACHIEVEMENT IN INTER-
DEPARTMENTAL

SPORTS

"GO THE EXTRA MILE, WIN WITH STYLE"









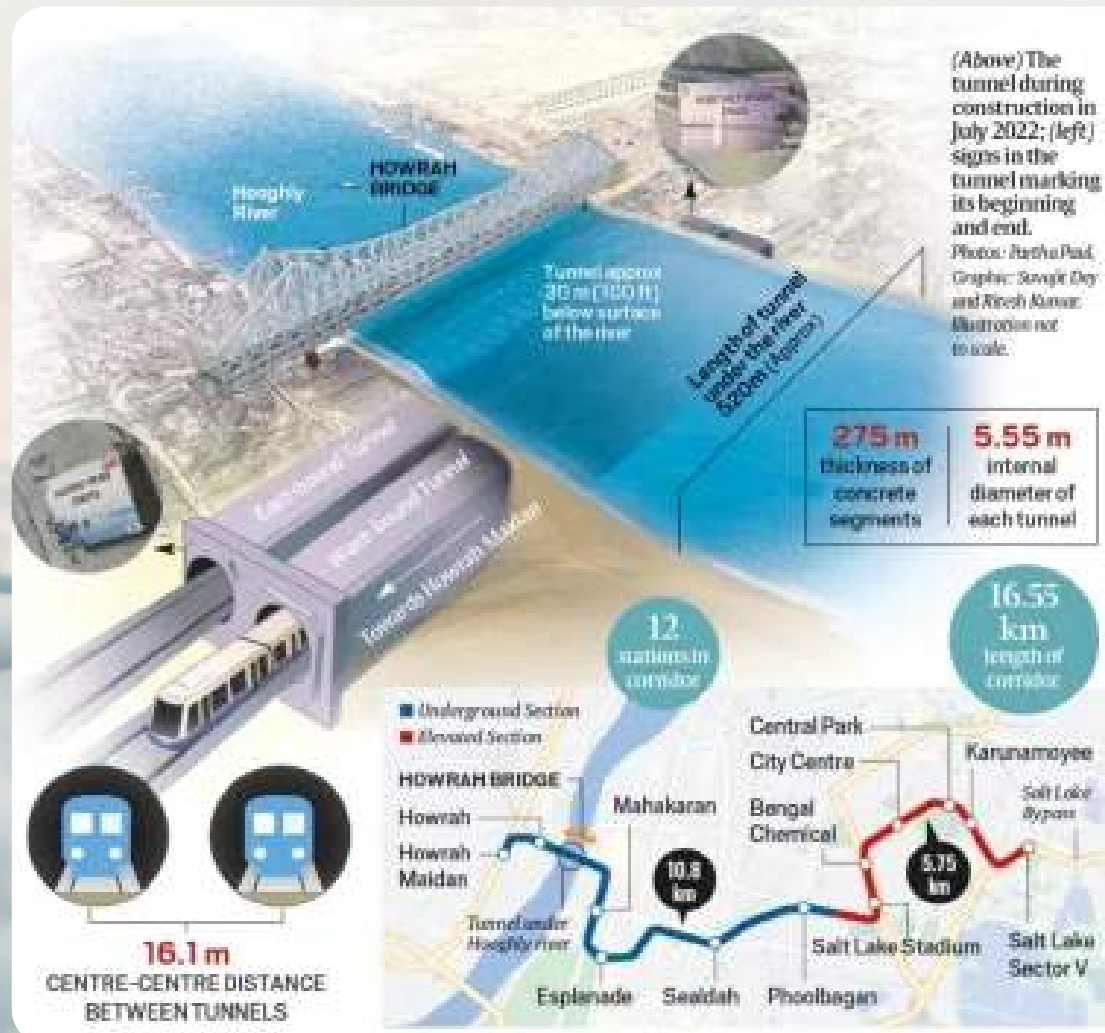
BEYOND LIMITATION
THROUGH

Construction



India's first underwater metro connecting Howrah Maidan & Mahakaran, established by Kolkata Metro Rail Corporation Ltd. on March 15, 2024

10.8 km (6.7 mi) (total)
 0.520 km (0.323 mi) (underneath Hooghly)





The MTHL Bridge gives a faster connectivity with proposed Navi Mumbai International Airport, JNPT Port, Mumbai to Pune & Mumbai – Goa established on January 12, 2024.





The great Larsen & Toubro company (L&T) guaranteed that the Ayodhya Ram Temple will last up to one thousand years whereas it is constructed within three years. This temple has been established on January 22, 2024. It has an ability of handling seventy thousand visitors at a time.



THE RAM TEMPLE

HEIGHT 161 FEET	LENGTH 360 FEET	WIDTH 235 FEET	CAPACITY 80,000 TO 1 LAKH devotees a day	COST Yet to be determined	ESTIMATED COMPLETION Three to three and a half years
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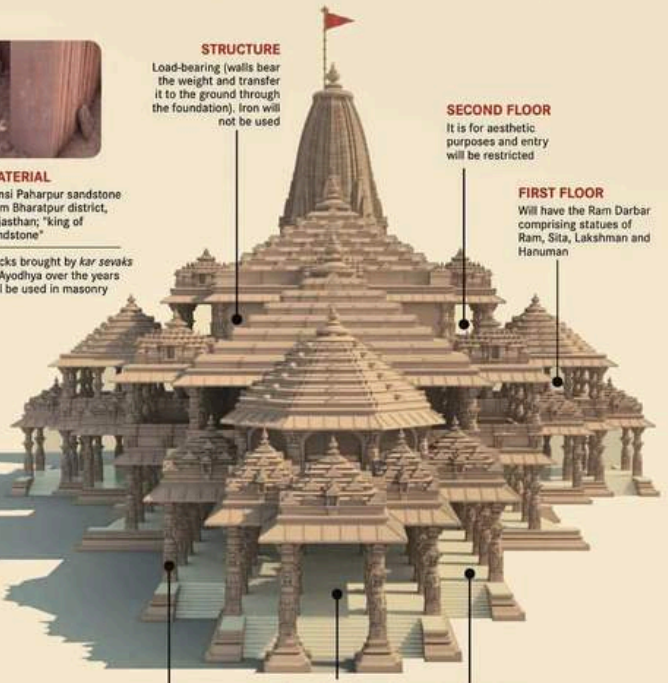
MATERIAL
Bansi Paharpur sandstone from Bharatpur district, Rajasthan; "king of sandstone"

Bricks brought by *kar sevaks* to Ayodhya over the years will be used in masonry

STRUCTURE
Load-bearing (walls bear the weight and transfer it to the ground through the foundation), iron will not be used

SECOND FLOOR
It is for aesthetic purposes and entry will be restricted

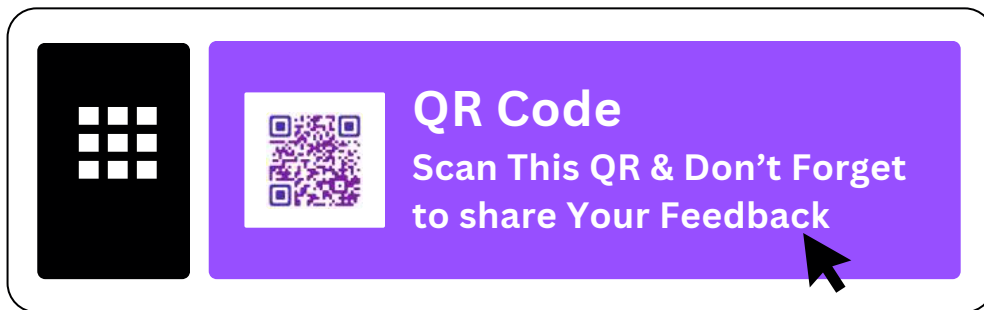
FIRST FLOOR
Will have the Ram Darbar comprising statues of Ram, Sita, Lakshman and Hanuman





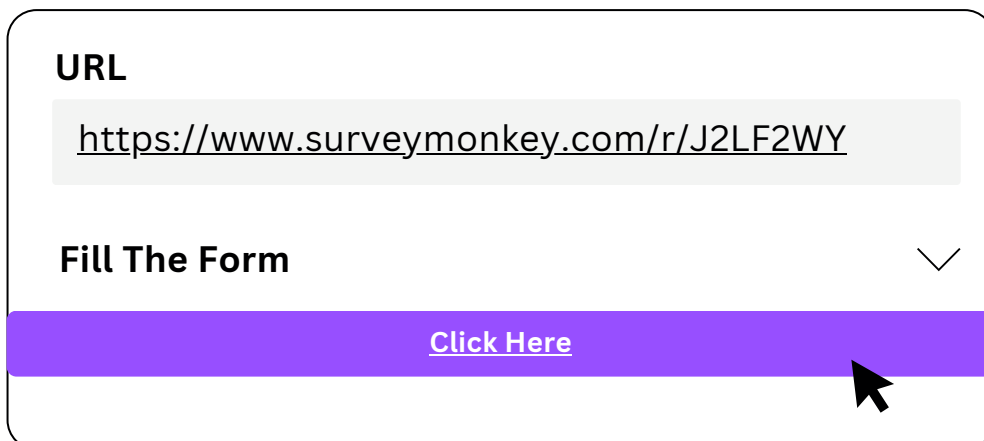
FEEDBACKS ARE CORDIALLY ACCEPTED

01 Open a QR code scanner application like Google Lens & Scan This QR code



OR

02 Fill the feedback form by clicking the link given below





Thank
You