

# THE ARCHITECTURE EXPERIENCE-

## NASA SUMMER WINTER SCHOOL 2.0 – SINGAPORE

The International Summer Winter School 2.0, The Architecture Experience Singapore edition happened in January and February in 2 batches and was curated by Ar. Rachita Bhonsle. It was an 8 day long experience, from 1st February to 7th February, focusing on the main theme – “Urban Housing, Development and Sustainability” The learning experience included seeing live projects, which focused on observing and learning about different techniques with a focus on sustainable architecture.

### DAY 0

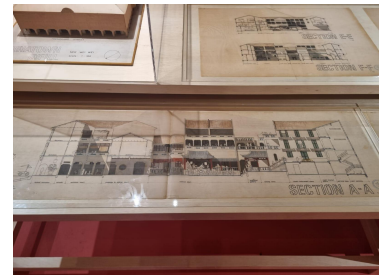
- From Pune to Chennai
- Arrival at Singapore Changi Airport at around 10 pm local time from Chennai International Airport.
- Introduction session amongst students and getting acquainted with Ar. Rachita Bhonsle, the curator and a debriefing session on the project’s expectations and outcomes.



### DAY 1

#### 1. URA CENTER

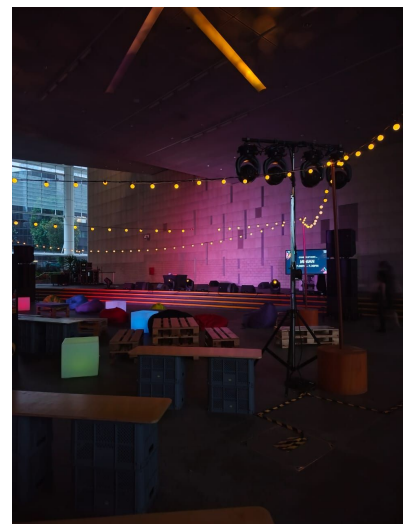
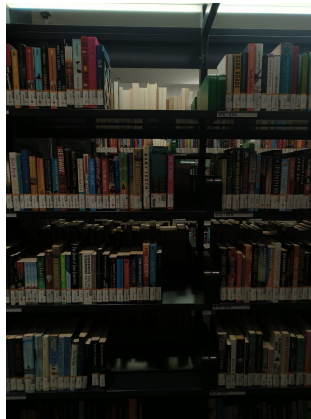
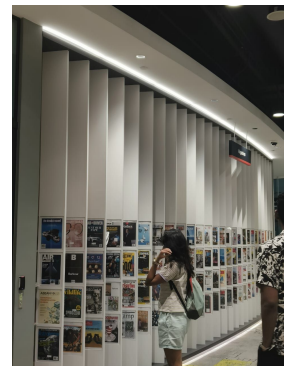
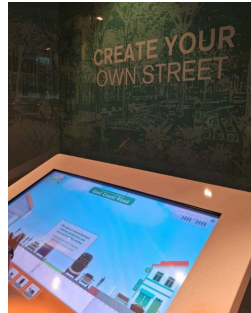
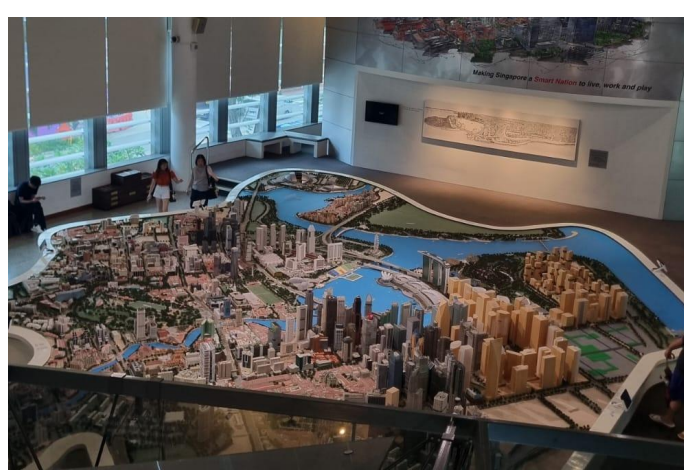
- URBAN REDEVELOPMENT AUTHORITY (URA) where the urban transformation journey of Singapore is documented.
- This gallery showcased the archived works of Singapore’s pioneer architects who led the way to the success of group housing. The archives included hand drawn sketches, isometric views, plans, sections and projects , landmarks were displayed in the form of scaled models , construction drawings along with conceptual ideas.
- The interactive zone featured audio recordings enunciating the importance of these drawings in nation building.
- Transitioning to the next exhibit, visitors engaged with interactive software showing strategies aimed at mitigating heat islands and reducing electricity consumption. Through simulations and visualizations, visitors gained insights into various measures such as green roofs and energy-efficient lighting, designed to promote sustainable urban development.
- The gallery had interactive panels showing why Singapore’s city thrives. Visitors could use AR/VR touch screens to explore cycling paths, parks, and community involvement.



- The highlight was a model of Singapore's downtown, with iPads nearby explaining each area and future plans.
- In essence, the exhibition seamlessly merged historical preservation with contemporary sustainability efforts, fostering a deeper understanding of the intertwined roles of cultural heritage and environmental consciousness.
- This center opened new doors to ideas , planning, and inspired students to think in a larger perspective.

## 2. NATIONAL SINGAPORE LIBRARY

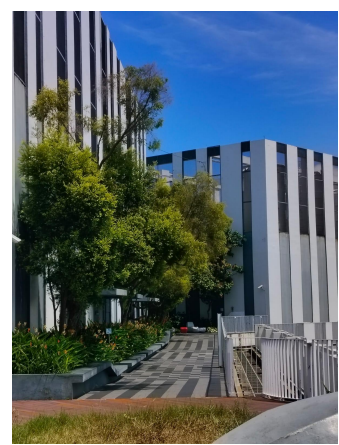
- Students chatted with Ar. Seiwa at the National Library, just 10 minutes from URA Center. He's both an architect and a professor at NUS.
- They asked about studying and working in architecture in Singapore, regulations for architects, and differences from India.
- They also sought advice on pursuing architecture and improving as architects. Later, they checked out the library's newly renovated basement wing.
- The day was concluded with an outdoor open to all event which took place at the building . Students enjoyed their evening , explored the event participated in activities like painting, block printing and much more.
- Before returning back to the accoms, students went on to explore famous Chinatown which is known for its busy streets, shopping expanse and food joints.



## DAY 2

### 1. PINNACLE@DUXTON

- The day started with visiting the world's tallest public housing building, Pinnacle@Duxton, which houses two longest sky gardens ever built on skyscrapers.
- After riding the elevator for 50 floors, we came at a halt at the skywalk, where we had a session with Ar. Christopher where we got learn about various construction techniques used in Singapore.
- We learnt about Project Management as a career path.
- After the session we explored the skywalk, later proceeded on to next place.



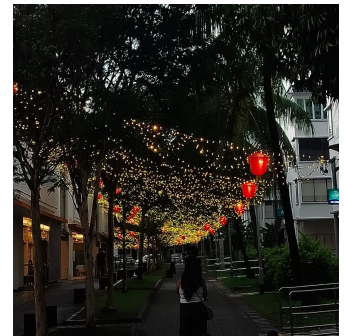
### 2. HDB GALLERY

- The Housing Development Board of Singapore has put up the gallery showcasing the Historical Evolution of Singapore as country, with paper documentations and models.
- It also has a display of life size modules of 1, 2, 3, 4, and 5-room public housing flats, that becomes a great learning and visualizing experience.
- We got to learn about city planning and sustainability through various immersive displays all around the gallery.



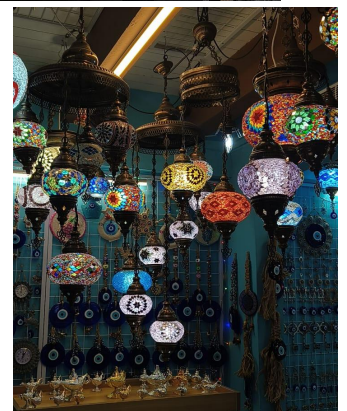
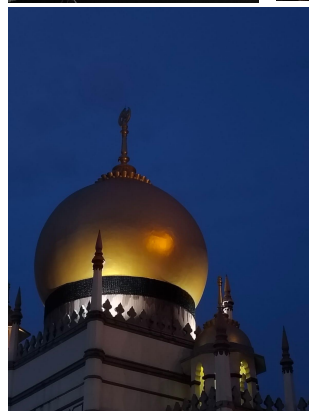
### 3. TIONG BAHRU

- One of the oldest planned Public Housing Colonies in Singapore.
- We got to see a comparatively low rise set of building complexes here with a lot of British influence with curved beam staircases



### 4. HAJI LANE

- We had an evening visit to Kampong Glam, Haji Lane where we did a bit of shopping, visited some cafes and concluded the day.



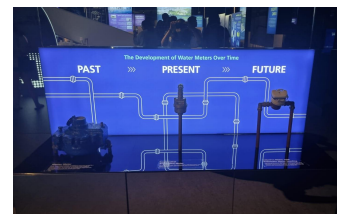
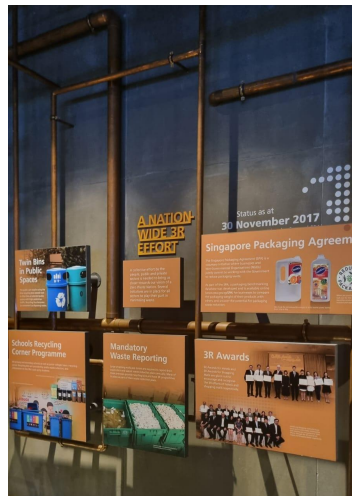
## DAY 3

### 1. HENDERSON WAVE BRIDGE

- The day began with trekking almost 2km to Mount Faber park and exploring the beautiful landscape of flora and fauna to Henderson waves bridge.
- This bridge is highest pedestrian bridge in Singapore , this bridge is 36 meters above ground and connects two hill tops Mount Faber and Telok Blangah hill
- The design of the bridge is very unique , it is supported through a series of ribs which then bend to blend with the wooden decking on the bridge and which also functions as the seating space on the bridge
- This created an interesting shadow pattern on the deck and made the bridge look even more mesmerising.
- After spending time at the time students headed to Vivo city mall to grab lunch

### 2. MARINA BARRAGE

- Students headed to Marina Barrage which is a dam in southern Singapore built at the confluence of five rivers
- It is largest reservoirs in Singapore and main function of the dam is to provide water supply , flood control
- Along with this the authorities at Marina Barrage have developed a sustainable gallery where they have explained the working of the dam
- Students got the opportunity to attend a guided tour of the gallery.
- Along with this water management , recycling , sustainable development in Singapore were also explained
- The approach of the authorities toward water supply , sewage , rain water harvesting , formation of strategies and their implementation were explained to students
- The gallery had interesting representation , through AR , games , smalls clips , pictographic presentations

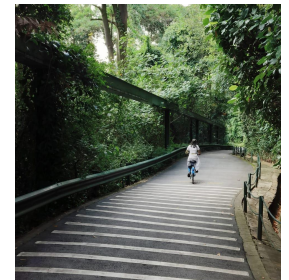
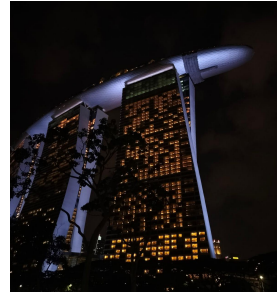


### 3. GARDENS BY THE BAY

- After enjoying the sunset at Marina Barrage students headed towards GARDENS BY THE BAY
- One the most famous landmarks in Singapore
- They enjoyed a spectacular light and sound show at Gardens by the bay
- Gardens by the bay was part of the nations plan to transform its *GARDEN CITY* to *CITY IN A GARDEN* initiative announced in 2005
- It is one of the best horticulture destinations with wide range of flora and fauna to explore and nature walks

### 4. MARINA BAY SANDS

- After this students headed towards MARINA BAY SANDS one of the most finest rooftop hotel and commercial space
- Students explored the MBS mall , visited Marina Bay Sands rooftop hotel for a spectacular evening view
- Later students explored the space and visited LV showroom , also explored live music cafes and food joints
- The day ended by crossing the Helix bridge and enjoying the night view



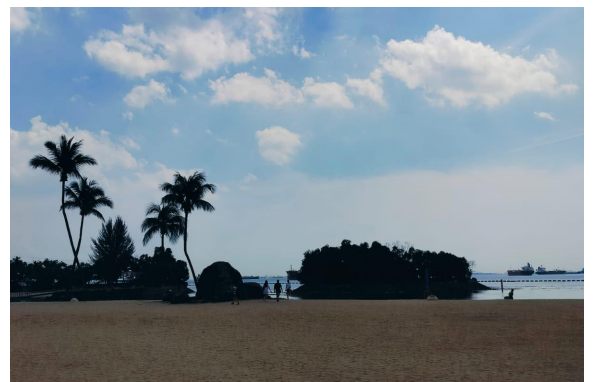
## DAY 4

### 1. SENTOSA ISLAND

- This day was a free day for us, where we explored the neighbourhood of the main city area.
- Taking the Sentosa Express, we reached Sentosa Island, we spent the day their roaming around, exploring cafes and playing around game by the beach.

### 2. SHOPPES BY THE BAY

- In the evening we reached back to the main the city area, and headed to the MBS Mall
- Over there we took part in the Chinese New Year Celebrations, it was a great experience to witness the culture portrayed through traditional dance forms.



## DAY 5

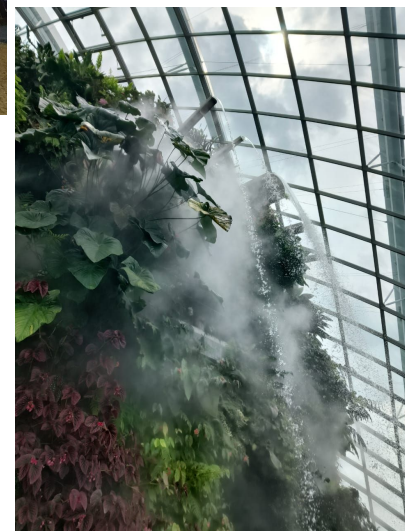
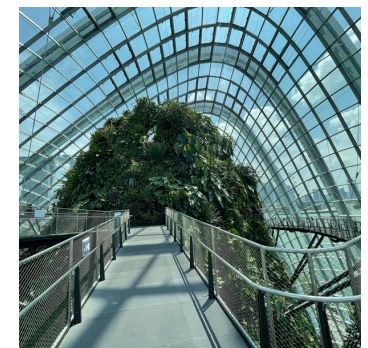
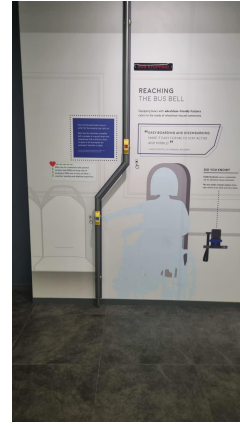
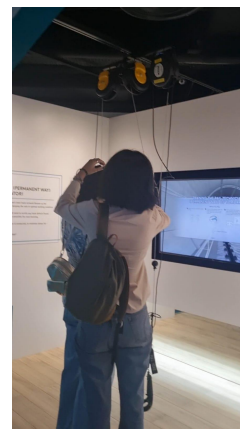
### 1. Public Transport Gallery

- Singapore is known for its spectacular public transportation system
- Students started with day by visiting PUBLIC TRANSPORTATION GALLERY where they learned about how Singapore developed its transportation system
- These systems were explained through pictographics, AR, VR simulators
- This gave students to experience driving a bus, which helped them understand the importance of road networks.
- Innovative system explored, universal design is given priority by updating transport vehicles, wider ticketing booths.

After that we were left to explore the city on our own.

### 2. CLOUD FOREST

- The concept of cloud forest was to recreate the now endangered species that grow on the top of the mountains, covered in clouds. Hence, 'cloud forest'.
- As soon as you enter, you are greeted by a large waterfall cascading through the greenery, which is the tallest man-made waterfall in the world. (at 35m)
- We were utterly captivated by the immersive experience it offered. As we stepped inside, we found ourselves enveloped in a world of lush greenery and misty air.
- One of the highlights was ascending the Cloud Walk. Cloud walk is a ramp that runs in a circular fashion from the top to the bottom of the man-made mountain top.
- Misting is releasing fine mist through pipes situated throughout the ramp. This is extremely important to maintain the optimal humidity levels for the plant life within the conservatory. Misting happens every 2 hours starting from 10am in the morning till 6pm for 15 minutes.

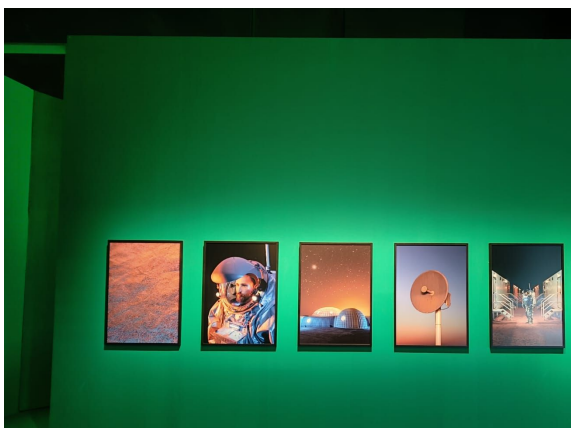
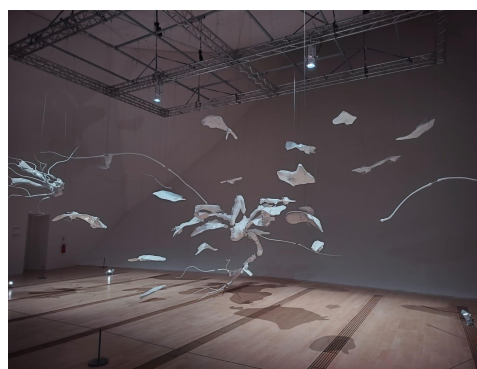
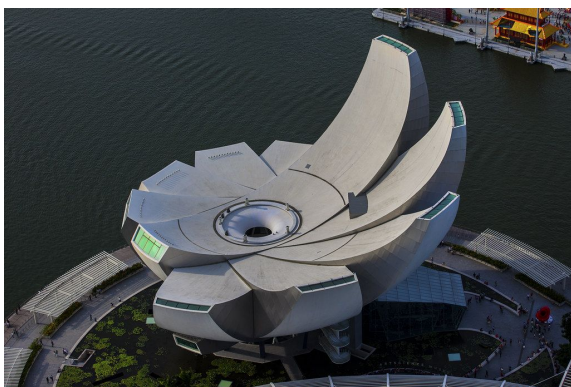
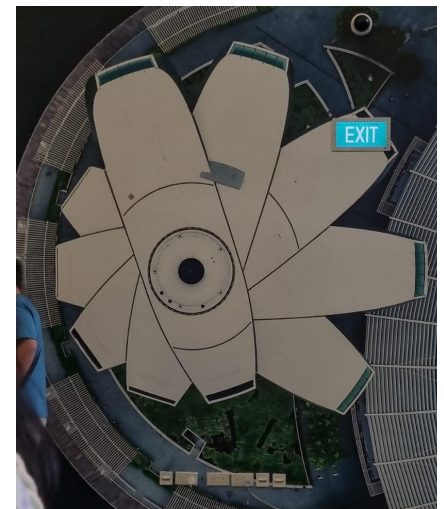


- The sheer scale of the vertical gardens and the towering waterfall is mesmerizing.
- The misty pathways were surrounded by exotic plant species from around the world.
- There were educational displays and interactive exhibits throughout the different levels of the mountain revealing important nature facts.
- They provided fascinating insights into the importance of conserving tropical biodiversity.
- There were preserved miniature species of orchids and many more plants which could be seen through a microscope to teach people about their importance.



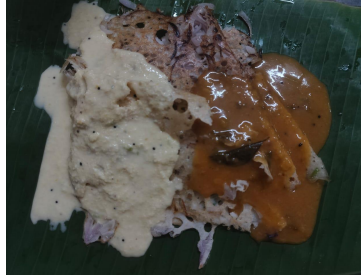
### 3. NATIONAL ART AND SCIENCE MUSEUM

- We ended the trip with the National art and science museum. It's an experience to be seen and felt and there are no words to describe it.
- There are a total of 3 experience rooms, namely Mars : the red mirror, New eden and Future World : Where art meets science
- One highlight was a stunning visual representation of the cosmos, blending intricate artwork with scientific imagery.
- The museum's commitment to education is evident through its hands-on activities and engaging programs for all ages. Overall, it's an inspiring subjective exploration of the intersection between art and science.



## DAY 6

- Returned to Chennai from Singapore via an early morning flight.
- We had a 7 hour layover at Chennai, so went out and roamed around Chennai, visited Mylapura Temple.
- Then we had the local cuisine visited and then visited a beach.
- Assigned job roles for the project upon arrival.
- Late night flight from Chennai to Pune.



*"This trip was much more amazing than I'd ever imagined. We visited so many spaces and the kind of freedom we got to explore the country on our own has definitely made me grow as a person. The overall experience of Singapore was different than India. The sustainable architecture, green innovative buildings, well planned and maintained urban design and helpful people. It was even more helpful since we're working on high-rise buildings this semester and weaving nature into these structures was something that I had never seen or learnt before. I am so grateful to NASA India, thehappyllamas and BNCA for this opportunity."*

*"This experience with NASA India, for the SWS 2.0 was everything I imagined and more. The knowledge I gained on this trip has helped me in some way or the other. The organization was also done very properly by TheHappyLlamas group. All the visits were well planned and well executed. There was no pressure for anything and we also got a lot of freedom regarding everything. Kudos! A big thanks to the college for giving us an approval for the trip."*

*"I am grateful and happy that I got the opportunity to experience SWS 2.0 SINGAPORE by NASA INDIA. And would like to thank THE HAPPYLLAMASINDIA making the trip hassle free. I would like to express my gratitude to the college authorities for approving this trip for us. The knowledge and experience I have gained through this trip will definitely help me to design better and understand different aspects related to architecture on a deeper level."*



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