

# JANUARY HIGHLIGHTS

January marked a strong start to the year at Lab of Future, with students engaging in meaningful projects, our R&D teams pushing engineering boundaries, and new collaborations taking shape

In the **Astronomy & Space Science department**, **Yathika (Age 11)** completed an inquiry-based research project using real satellite data from the **European Space Agency's CHEOPS mission**. Through the analysis of stellar brightness data, she learned how scientists detect and study exoplanets, gaining early exposure to authentic astronomical research practices.

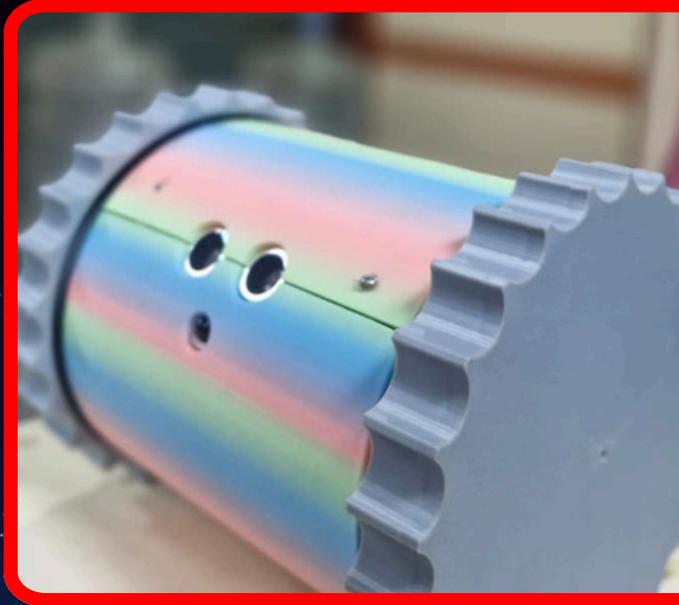
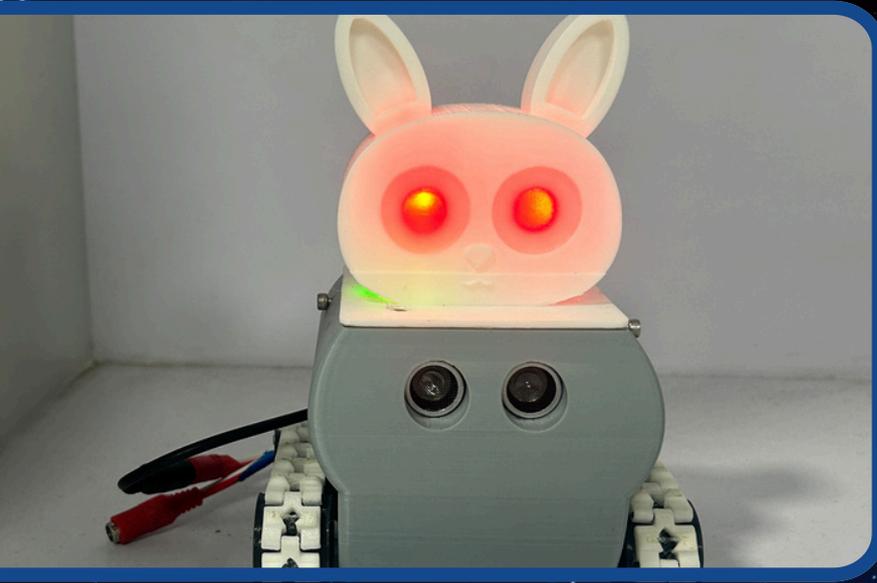


In the **Space Technology & Robotics department**, students worked on the **Smart Space Helmet project**, where she studied how astronaut helmets monitor internal environmental conditions and translated this understanding into a **digital 3D helmet design integrated** with temperature and humidity sensors. The project introduced wearable technology concepts, sensor integration, and systems thinking used in real space engineering.



In the **Artificial Intelligence & Data Science department**, student **Arsh** worked on **Predictive Air Quality Sentinel**, a project that explored how machine learning can improve the reliability of low-cost air quality sensors. By working with real environmental datasets and applying regression models, the project demonstrated how AI can correct inaccuracies caused by temperature and humidity, offering insight into how data science supports sustainability and public health.





# RESEARCH & DEVELOPMENT PROGRESS (CHENNAI INNOVATION HUB)

January was a high-execution month for the Lab of Future R&D team in Chennai, with multiple systems moving steadily from concept into active development, testing, and refinement.

The **Aerospace R&D stream** continued to expand across age groups, balancing foundational learning with advanced system design.

- **For younger learners**, projects such as solar stations, hydraulic landing gear mechanisms, airfoil testing rigs, and RC aircraft supported hands-on understanding of aerospace fundamentals
- **For advanced groups**, work progressed on autonomous drones, auto-stabilised gliders, wind energy systems, and CubeSat structural prototypes, integrating aerodynamics, electronics, and control systems

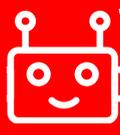
In **Astronomy curriculum development**, several modules reached version-one completion and moved into refinement based on classroom trials and educator feedback, including

- Measuring the Cosmos
- Stellar Constellations
- Asteroids

In **Robotics research**, the team advanced work on environmental sensing, **autonomous movement**, and responsive behaviour systems. Key progress areas included:



Completion of initial functional stages for environmental sensing platforms such as the Atmosafe Weather Station



Behaviour refinement and testing for mobile systems including the Heat-Seeker Rover and Shadow-Triggered Escape Bot



Early development of new research initiatives such as a hexapod robot exploring multi-legged locomotion and a magnetic surface exploration platform focused on stability.





# FAMILY DAY & OPEN HOUSE AT LAB OF FUTURE

January also featured a vibrant Family Day & Open House at Lab of Future, where parents and children spent the day learning by building together inside a real makerspace environment. Families worked hands-on with electronics, creative machines, sensors, and practical engineering tools, experiencing how meaningful learning happens through collaboration and making.



**THE DAY WAS ANCHORED BY THREE KEY SESSIONS:**

## Be a Maker

Makerspace Experience, led by Simone Majocchi, where families worked side by side using real tools and materials, focusing on craftsmanship, problem-solving, and hands-on creativity.

## Ivy League & Global University Aspirations,

Delivered by Ingenious Prep experts from Yale and Ivy League colleges, offering families clarity on how top global universities evaluate students beyond grades, including research, projects, and long-term profile building.

## Preparing for Future Skills

An interactive session led by Arpit Dugar, connecting hands-on making with mindset development, future-ready skills, and how learning is evolving beyond marks and degrees.

Together, these sessions created a shared learning experience that went beyond observation, helping families slow down, think deeply, and reconnect with learning that feels purposeful and real.

# Events & Conferences

January saw Lab of Future actively engaging with the education ecosystem through participation in **the Middle East School Leadership Conference and Teach Middle East.**

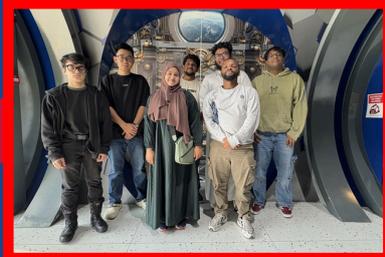


These platforms enabled meaningful conversations with **school leaders and educators around future-ready labs, research-driven curricula, and experiential learning models.**

# LAB TOURS AND ENGAGEMENT



We welcomed students from **The Filipino School, Sharjah** and **The Sheffield Private School** for immersive lab tours that demonstrated how hands-on learning transforms theory into application.



**Our ECA programs** continued across partner schools, including aeromodelling at Dwight School Dubai, 3D printing at **GEMS Legacy School**, and cyber safety initiatives focused on responsible digital citizenship.

February lab tour slots are now fully booked, with limited availability remaining for March sessions.

## Delegate Visits & Partnerships

We were pleased to host delegates from Al Hammad Company for Educational Projects (KSA) and Knight of Knowledge (Jeddah). Discussions centred on future-ready school labs, technology integration, and long-term collaboration opportunities.

# NEW SERVICE ANNOUNCEMENTS

JANUARY ALSO MARKED THE LAUNCH OF NEW OFFERINGS, INCLUDING DIY STEM KITS, SCHOOL TECHNOLOGY OVERHAUL SOLUTIONS, AND ZERO GRAVITY WORKSHOPS, EACH DESIGNED TO HELP SCHOOLS TRANSITION TOWARD IMMERSIVE, TECHNOLOGY-ENABLED LEARNING ECOSYSTEMS.

## ZERO GRAVITY WORKSHOP



AERONAUTICS

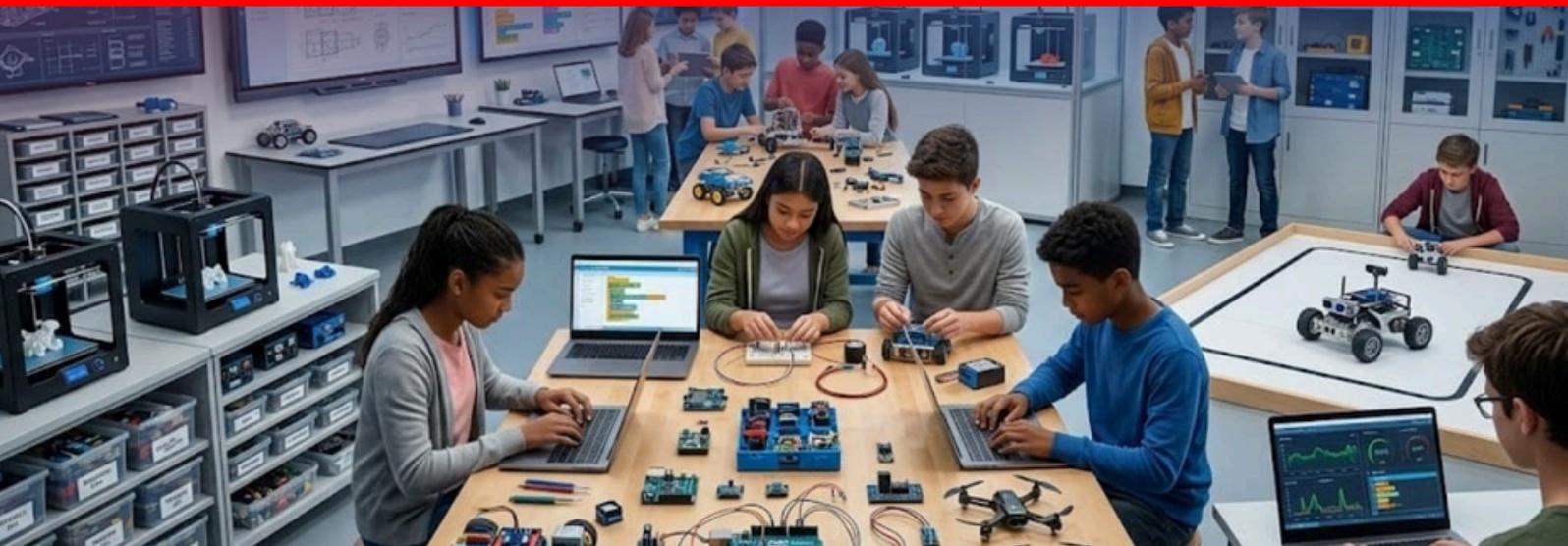


AQUANAUTICS



ASTRONAUTICS

## DIY STEM Kits



# Looking Ahead

January set a steady and confident tone for the year ahead grounded in meaningful student work, focused research, and growing partnerships. As Lab of Future continues to scale, our commitment remains on building depth, relevance, and real-world impact.



At Lab of Future, learning doesn't stop at understanding concepts. Students build, explore, and prepare for what's next.