



STEMpedia presents

2023-24

## CODEAVOUR 5.0

INTERNATIONAL

Innovation Fest For the Next-Gen



## IMPACT REPORT























## CODEAVOUR

#### Innovation Fest for the Next-Gen

"Imagine a future where young minds harness the power of AI, Coding, Robotics and AR-VR to tackle real-world challenges and bring meaningful change in their communities!"





## **Student Chronicles**Codeavour Through Their Eyes

"Today's young minds are tomorrow's leaders. Let's empower them to think creatively, using their imagination and skills to innovate and build a brighter, better future for all."

As students, our innovation ignites creativity. Transforming our ideas into problem-solving projects and turning our visions into reality.





From Egypt to Dubai, the experience has been truly wonderful. I am eagerly looking forward to participating in the upcoming editions as well.

We are Young Innovators, creating solutions for making the world a better place to live.





It was our first experience in AI, ML, and Data Science, and it was incredibly enjoyable. I gained a lot of knowledge from the training and doubt-solving sessions.

## CONTENTS

01 **About Codeavour Groundbreaking Edition Codeavour 5.0** 02 Innovative Tracks and Themes The Prestigious Rajeev Motwani Fellowship Program 03 The Worldwide Triumph of Codeavour 5.0 04 Impactful Journey of Young Innovators 05 Innovations Made by the Genius Minds Partner Successes in Codeavour 06 Regional and National Highlights International Showdown in Dubai 07 Crowning the Global Champions **Architects of Innovation** 08 · Evangelists and Ambassadors The Journey from Learners to Innovators 09 Introducing The All-New PictoBlox **10** National and International Media Coverage

**Sponsors and Major Collaborators** 

## CODEATOUR

#### The Biggest Innovation Fest for the Next-Gen

Codeavour is the biggest International AI, Coding, and Robotics Competition hosted annually by STEMpedia and ARTPARK, IISc Bangalore, where participants make innovative projects with hands-on learning using PictoBlox to make the world a better place.

Through training sessions and workshops, students can explore the exciting world of AI, ML, Coding, Robotics, and AR-VR. The training promotes the development of critical thinking, creativity, collaboration, and communication, the four Cs of 21st-century skills!

Foster an interest in Coding, Artificial Intelligence, and Robotics to explore exciting possibilities and real-world applications. Promote social responsibility and sustainability by developing sensitivity to global well-being and awareness.

Cultivate problem-solving abilities and an innovative mindset to enhance critical thinking and creativity, driving the development of innovative solutions.

Enhance technical skills through interactive, hands-on activities and doubt-solving sessions.







## The Groundbreaking Edition, Codeavour 5.0

This edition aligns with the United Nations' Sustainable Development Goals (SDGs), inspiring participants to harness their AI and coding skills to solve real-world problems, fostering innovation, and contributing to a sustainable future through impactful, technology-driven solutions.

The Shift from Virtual to Physical, Codeavour Bringing Global Exposure to Students

#### **Unveiling New Horizons at Codeavour 5.0**

This year, Codeavour 5.0 International offered the students exciting opportunities to transform their ideas into innovations with **new tracks**. Participants have showcased their concepts at the event and compete for awards, **fellowship and mentorship** opportunities.



#### **Track 1 - Innovation and Entrepreneurship**

- Students create tech-driven Al, ML projects using PictoBlox and hardware like Quarky, Evive, Arduino, and Lego.
- Projects are themed around UN SDGs.
- Students pitch their projects, showcasing entrepreneurial skills and future readiness.

#### **Track 2 - AI Robo City Challenge**

- This track is an exciting physical robotics competition.
- Participants design and build robots to complete object-placing missions in a dynamic cityscape.
- The track tests AI and robotics skills, pushing young innovators to the forefront of technology.



#### Global Physical Event



- Over 13 regional events were held across India, along with 19 national events worldwide and a grand international showdown in Dubai.
- Each event provided invaluable exposure and experience.

#### Fellowships and Mentorship



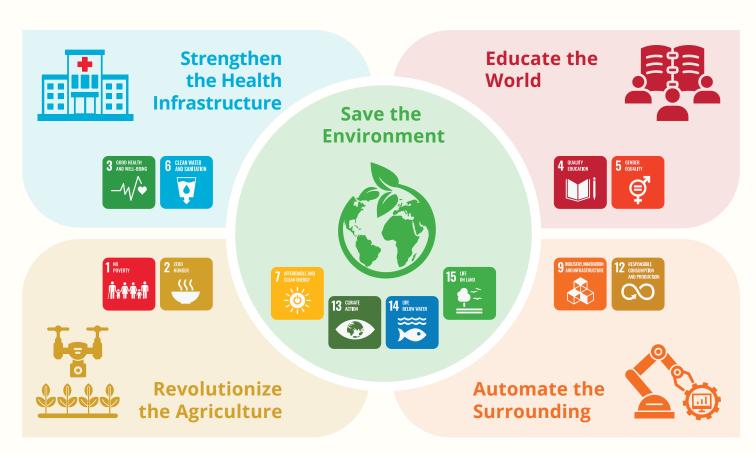
- The Rajeev Motwani Fellowship Program empowers young innovators, fostering a dynamic entrepreneurial community.
- Top 20 participants and mentors from the Senior Group won a trip to Mexico for the FAB24 Event.

## Track-1: Innovation and Entrepreneurship

This track is designed to cultivate entrepreneurial skills in young minds by fostering creativity, problem-solving abilities, and an innovator's mindset. It inspires participants to tackle real-world challenges, aiming to improve their communities and beyond. Participants will develop and present projects and prototypes that address global issues, aligning their efforts with the United Nations Sustainable Development Goals (UN SDGs).

#### Innovative Themes to Solve Real-World Challenges

Towards building a sustainable future, the participants innovated groundbreaking solutions addressing real-world challenges and driving entrepreneurial innovations around the below themes.







## **Track-2: Al-Robo City Challenge**



The track provides students with an engaging hands-on robotics competition to showcase their skills and precision. Using Quarky and the **Creators Kit**, participants build and program robots to address real-world challenges through AI, striving to solve as many missions as possible among the given 11.

This immersive experience cultivates creativity, teamwork, and problem-solving abilities, offering invaluable learning opportunities.

#### Mission to Build a Sustainable Ecosystem

Participants were tasked with programming their robots to navigate a designated arena, solving missions that present feasible solutions to existing problems in their environment.

1. Water Treatment Plant Project

2. Canal Solar Power Project

3. Hydroponic Farm Produce Supply

4. Clean the Park

5. Clean the City

6. Smart Wind Turbine

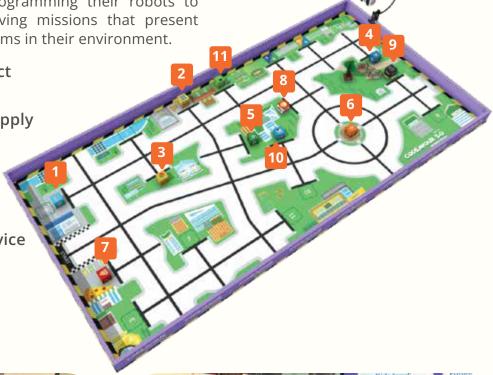
7. Food Delivery Bot

8. Autonomous Ambulance Service

9. Road Safety Robot

10. Rescue the Cat

11. Green City Project







#### Asha Jadeja Motwani

Founder, Motwani Jadeja Foundation, USA

Our dream is to spark off disruptive ideas, activities and technologies through our entrepreneurs and have a massive impact on problems in the developing world.

Motwani The Motwani Jadeja Foundation, Jadeja founded by Rajeev Motwani and Asha Foundation Jadeja, promotes entrepreneurship and innovation for positive global change. You can empower, educate, and mentor individuals and organizations to tackle challenges through initiatives in education and ecosystem building. The foundation fosters innovation culture and social impact in emerging economies.



## The Prestigious Rajeev Motwani Fellowship Program

The Rajeev Motwani Fellowship Program aims to empower young students to become changemakers by providing the opportunities to learn, create, collaborate and excel at **FAB24 Event in Mexico**. The students would be recognized as **Rajeev Motwani Fellows**.

The fellowship is aim to bring out the best in entrepreneurs from the developing world, linking them closely to **Silicon Valley** and providing them the much needed education, mentorship and support.

Young innovators ignite our imagination. We welcome these Young Minds at Fab 24 to see and explore the latest technology development and social environment outreach for a better tomorrow.









#### **Empowering Changemakers:**

- Provides transformative experiences, connections, and resources.
- Aligns with the Theory of Change of Motwani Jadeja Foundation.
- Equips students to address societal issues and make a positive impact.

#### **FAB 24 Event Details and Programs:**

- The prestigious FAB 24 Event is scheduled for August 3rd to 9th, 2024 in Fab Lab Puebla, Mexico.
- Interactive Workshops would be conducted for Participants to experience hands-on sessions and acquire cutting-edge digital manufacturing skills and techniques.
- **Skill Development** to gain proficiency in the latest digital fabrication methods.
- Global networking to connect with innovators and experts from around the world.
- Encourages global exposure and out-of-the-box thinking.
- Insights and Innovations to discover the newest advancements from the global Fab Lab Network.

















## **Global Impact Through Innovation: The**

## **Worldwide Triumph of Codeavour 5.0**



## Impactful Journey of Young Innovators Usha Kumawat- The Coding Prodigy from Goa



In the lively **streets of Goa, Usha Kumawat**, a Class 9 student discovered her passion for coding. Despite having **no laptop and limited financial resources** her father's determination led him to seek help from their local **MLA Shri Kedar Naik** and **Ward Panch Shri. Suraj Chodankar** provided the needed support and generously donated a laptop.

With guidance from mentors at the **The Progress High School**, **Panjim**, Usha learned to code in just **14 days** and build her robot for the competition. Overcoming many challenges, she won the regional Codeavour competition, proceeded to the **India Nationals**, and stood victorious there as well, then came the most crucial moment of **making it to the Dubai for International Showdown**.



However, the financial condition of her family became a constraint in her journey to the international showdown in Dubai but Usha's mentor took up the challenge of **raising funds**. Despite numerous document issues, including mismatched names and birth certificate errors, they persevered and created **a fundraising** 







video with advice from Mr. Saiesh Gandhi and launched a campaign on Ketto, raising Rs 37,000 with significant support from Mr. Vincent Toscano and the STEM Education Trust. The Saraswat Education Society's fundraising efforts garnered an additional Rs 50,000 from well-wishers. Overcoming numerous setbacks, she persevered and achieved a remarkable victory at the Codeavour International competition in Dubai paving her way to attend the prestigious FAB 24 Event in Mexico for a fellowship and mentorship program.

#### **Arsha Nidhi Foundation Fostering Innovation Culture**



In a testament to innovation and social progress, **Sweety Kumari** and **Suruchi Kumari from Kolkata** proudly highlight the outstanding achievement of their project, **Womenstrual Cycle**. Despite facing struggles, financial issues, and no prior coding experience, their determination to **tackle menstrual health stigma** drove them forward. **Inspired by the movie Padman** and under the mentorship of their mentor Nikita Shah, they developed this project to address menstrual health challenges.

Their journey began with **winning regional and national competitions**, making them the first girls from their family to participate in an international competition.

Despite their success, they encountered major roadblocks, including difficulties in obtaining visas, passport verification, and limited financial resources but their mentor supported and stepped up, raising Rs 28,000 through crowdfunding and securing Rs 70,000 from the Rotary Club Kolkata. With additional support from STEMpedia and travel agents, they overcame these challenges and achieved international recognition, winning the esteemed Girl in STEM Award.



#### NTPC Giving Wings to the Young Innovators



From modest beginnings and limited resources, the **Codeavour Ninjas** of **MJPAPBCWRIS School**, **Thanam** rising from Lower middle-class families, embarked on their coding journey with determination and hope. Despite facing challenges, lack of resources, and no technical background their dedication, creativity, and real-life experiences inspired them to develop the **Medical Slum Care device**, enabling individuals in **underserved areas to access medication** with a simple click. Utilizing servo motors and relays, users can select and receive appropriate medication for various diseases through an intuitive interface. Notable features of this device include **automatic ointment application** and **wound cleaning** with water, significantly enhancing its utility in providing comprehensive emergency care.

With continuous support from their mentors and the pivotal role of educational institutions like MJPAPBCWRIS School, Thanam and Junior College in nurturing the **problem-solvers** of tomorrow, the team's journey from a national triumph to the global stage exemplifies the spirit of innovation and eventually winning the **MJF Livelihood and Sustainability award.** 





Director of Training and Skill Education Central Board of Secondary Education, Ministry of Education, Govt of India

I am honored to underscore the transformative impact of computational thinking on our youth's future. This approach not only readies students for evolving career landscapes but also integrates crucial social and technological frameworks, equipping them to navigate dynamic shifts in the decades ahead. These foundational skills are pivotal in preparing students, and we are aligning these principles within CBSE through skill-based subjects such as AI, Coding, and Robotics.



#### **Creative Minds in Action**





#### Young Visionaries, Bold Innovations

#### **Automate the Surroundings** Advanced Safety Solutions



Vigilant Visor, AI, and IoT solution

**Reyaansh Dhagle**, India Age Group: 7-10 Years

It addresses global work-related fatalities and injuries, in the mining sector. It ensures workers wear essential PPE, tracks their real-time location using a QR code system, and monitors environmental conditions to maintain a safe working environment.



**Smart And Automatic Segregation System** 

Nur Ibrahim Buba, Halima Muhammad Shettima, and Shamsuddeen Aminu Wali, Nigeria Age Group: 11-14 Years

The Waste Segregation and Sorting System, programmed with Arduino Uno and PictoBlox, uses sensors to enhance recycling, reduce pollution, and promote sustainable waste management for a cleaner environment.



**Smart Door, Advanced Home Protection** 

**Jumana Hussin**, Iraq Age Group: 7-10 Years

This innovation integrates facial recognition with an electronic lock, enhancing child safety by unlocking only when a parent is present, thereby improving home security and safeguarding children.



Drone Acharya, An Efficient Solution for Modern Industries

**Samriddhi Kori and Swara Bhavi**, India Age Group: 15-18 Years

A Revolutionary drone for military, wildlife, agriculture, firefighting, and rescue, featuring facial recognition, precision targeting, tranquilizer darts, fire detection, goods delivery, and autonomous flights.

## Strengthen the Health Infrastructure

### Shaping Tomorrow's Healthcare Landscape







#### Healix, Al-powered healthcare solution

**Chirag Anand and Sindhoora Raja**, India Age Group: 15-18 Years

This innovative automated solution reshapes healthcare by tumor targeting analyzing brain, lung, and bone abnormalities with Al. Its Additional features include mental health diagnosis through NLP, monitoring seizures and vitals with wearables, and covering diagnoses from cancer detection in pathology to retinal scans for diabetic retinopathy.



#### Life Saving Robot a Next-Gen Healthcare

Malak Mohammed Odeh, Hala Jihad Hamdan and Hala Jihad Hamdan, Jordan Age Group: 11-14 Years

The patient care system, made with Arduino Uno and various sensors, helps check BP, detect fainting or abnormal movements, communicate with the patient, remind medication schedules, provide medicines, detect air pollution, and activate filters for health.



#### Twothi Seat 2000, Redefining Wheelchair Comfort

**Jiyaan Rushabh Shah**, UAE Age Group: 7-10 Years

Crafted for individuals with disabilities, this innovative wheelchair embodies the fusion of technology, compassion, and sustainability. The aim is to create a world where everyone can embrace life's opportunities to the fullest regardless of their circumstances.



### **School helper MR. I'MEE, Transforming Student Safety**

Mariam Almazroui, Elina Syed, and Issa Abu Taha, South Africa Age Group: 7-10 Years

This innovation uses the latest technology in Face Detection for Attendance and Machine Learning for Injuries, ensuring timely aid by providing first aid for minor injuries and promptly alerting nurses for major ones.

## Save the **Environment**

#### Commitment to Conservation











#### Trash Trooper, Modernizing Waste Handling Systems

**Hitika Patel**, India Age Group: 7-10 Years

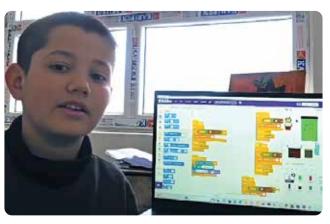
This innovative Waste Management System optimizes space and transportation by compressing waste. It utilizes advanced infrared sensors to detect trash, activating a motor-operated compressor for efficient compression, while a pump aids composting by supplying water for decomposition.



#### **Guardian of the Wild**

**Ahmed Guso**, Bosnia and Herzegovina Age Group: 15-18 Years

A drone with powerful motors, sensors for precise tracking and stability, and a delivery mechanism for sustainable food, aids in conservation efforts for endangered species, facilitated by long-range communication and high-resolution imaging.



#### Recycling development, From Waste to Wonders

**Humam Muqdad**, Iraq Age Group: 11-14 Years

The project uses advanced recycling methods to transform waste into practical items, highlighting recycling's role in waste reduction and environmental preservation. Failure to recycle may lead to pollution and increased reliance on fossil fuels, emphasizing the urgent need to recycle.



#### **Futuristic Energy City**

Raghad Mazen Albzra, Ghazal Nabil Barakat, and Rilam Abdullah Alamr, Saudi Arabia Age Group: 11-14 Years

Desertification damages Iraq's land with dry soil, overgrazing, and urban growth. To combat it, we require water, trees, and education. This project aims to educate on desertification's impact and promote eco-friendly practices.

## Educate the World

#### Lighting the Path for a Better Tomorrow







Signology: Bridging the Deaf Literacy Gap

**Saanjh Balpande**, Bahrain Age Group: 11-14 Years

An assistive reading technology that interprets printed text from books and documents, translating it to American Sign Language or hand signs. This empowers the deaf community with independent access to educational materials, fostering an inclusive learning environment.



Melody AI, Coding Creativity into Sound

**Alexander Santoso and Leonardo Santoso** Indonesia Age Group: 7-10 Years

Experience the new way of music therapy with coding, ML, and Al, featuring personalized Arduino instruments that enhance the fusion while connecting music to universal languages like math, art, and emotion, echoing the serene harmony of sand and sea.



**Artificial Intelligence-based Teacher, Transforming Learning** 

**Johann George**, India Age Group: 7-10 Years

This AI-based teacher provides personalized instruction to students individually, without a teacher, utilizing face recognition to identify students. Besides teaching, it asks questions, raises scores for correct answers, and clears doubts using the ChatGPT extension, focusing solely on academic topics.



Safety School, ControlledCode Access

**Haider Karar**, Iraq Age Group: 11-14 Years

This school preservation project features a secure entry system where authorized individuals enter a code for access. Incorrect codes trigger a lock notification, while correct ones prompt a welcoming message. This measure safeguards staff and student records, ensuring school security.

## Revolutionize the Agriculture

## **Shaping the Future of Farming with Technology**







AgroSphere: Next-Gen Remote Agriculture Ecosystem

Aaditya Shreewastav, Liam Parajuli and Abhimod Upreti, Nepal

Age Group: 11-14 Years

AgroSphere revolutionizes agriculture with remote systems for climate, irrigation, and monitoring. Features include sunroof opener, temperature control, water pumping via sensors, and environmental control.



IoT-Based Tractor, Leading the Agricultural Revolution

**B Keerthana, Rahithya and Gayathri**, India Age Group: 15-18 Years

Amidst challenges in traditional farming, our observations inspire tech solutions. The Arduino Uno/Node MCU processes sensor data, while the L298N motor driver enables precise tractor control, making the system suitable for outdoor agricultural operations.



#### **AgriForecast**

Benjamin Joseph Lie, Indonesia

Age Group: 11-14 Years

It's an Al-powered project, supports young farmers by accurately predicting crop yields and advising on profitable crop selection. By addressing challenges such as climate change and inexperience, it provides essential guidance for making informed farming decisions. This innovative tool ensures that the farmers can optimize their efforts.



**Green Life Robot** 

**Julanar Mohammed**, Iraq Age Group: 7-10 Years

The smart robot automates indoor plant watering with soil moisture sensors, ensuring precise care and healthy growth. It offers an easy and effective solution to maintaining indoor plants. This innovative technology ensures that plants receive the optimal amount of water, promoting vibrant and thriving indoor gardens with minimal effort.

#### **Girls in STEM** Insipiring the Young Female Visionaries



Hear Me and Talk to Me

**Teba Raad**, Iraq Age Group: 15-18 Years

humanitarian initiative addresses This communication barriers for deaf and mute individuals by translating sign language into and text, facilitating seamless interaction. It is designed to cater to people of all ages and education levels. By ensuring accessibility and effective communication for everyone, it distinguishes itself from similar projects, fostering a more inclusive and connected community.



Womenstrual Cycle, Eco-friendly pad disposal system

Sweety Kumari and Suruchi Kumari, India Age Group: 11-14 Years

An initiative to remove the stigma associated with menstruation through AI and robotics, it educates teenagers via quizzes, tracks mood swings, automates pad creation and pad disposal using household materials, and provides a TENS massager for pain relief.



Yoga Tech

Farah Mohamed and Anwar Hanafi Manhmoud, UAE

Age Group: 11-14 Years

This solution, designed for teenagers, promotes a healthy lifestyle with Al assistance. It makes exercise enjoyable by dancing and incorporating provides nutritional guidance by scanning food items, suggesting healthier alternatives. By blending technology and health, it encourages teens to make better lifestyle choices in a fun and engaging way.



Healthy Life for Teens, Al-Powered FitGen Innovation

Jacquelyn Calista Chen, Indonesia Age Group: 11-14 Years

This is a solution dedicated to teenagers, promoting a healthy lifestyle with Al assistance. It facilitates enjoyable exercises like dancing and offers nutritional guidance by scanning food and suggesting healthier alternatives to processed options.

## MJF Livelihood and Sustainaility Award

### **Creating Opportunities, Changing Lives, and Making an Impact**



**Farm Vision, Your Virtual Crop Advisor** 

**Zuniyed Hossain Bhuiyan, L.M. Mahir Labib and Ferdous Ahmed**, Bangladesh Age Group: 15-18 Years

A farmer-friendly crop selection platform with real-time Agri news, land condition insights, sensor data, and Al-driven decision-making. Its advanced Al assists in decision-making, automates tasks like path detection for powerbots, and predicts crop suitability, enabling farmers to optimize crop selection.



**Medical Slum Care, Bridging Healthcare Gaps** 

Maryam Ibrahim Buba, Ali Aminu Wali and Faisal Abdulazeez Kolo, Iraq Age Group: 11-14 Years

This innovative traffic light system transforms road management with green energy, ultrasonic sensors, and RGB lights, ensuring swift setup, minimizing accidents, and optimizing traffic ops. It prioritizes safety, reduces travel time, and fosters a more sustainable and resilient urban infrastructure.



**Automatic and Systematic Traffic Regulating Operator** 

Maryam Ibrahim Buba, Ali Aminu Wali, Faisal Abdulazeez Kolo, Nigeria Age Group: 11-14 Years

This innovative traffic light system transforms road management with green energy, ultrasonic sensors, and RGB lights, ensuring swift setup, minimizing accidents, and optimizing traffic ops. It prioritizes safety, reduces travel time, and fosters a more sustainable urban infrastructure.

#### AWS Out-Of-Box-Idea Inspiring Limitless Innovation



Youth Climate Action, for a Greener Future

Pooja Samanta Jaggerssar, Trinidad and Tobago Age Group: 15-18 Years

Innovative smart gloves empower blind and sick individuals with independence, alerting dangers, enabling emergency calls, and featuring a heart rate monitor and sound system for safe navigation and health tracking.



**Autonomous Solar Panel Cleaner** 

Viona Vikalp Shah, Navya Niket Galaiya and Jiyaan Binit Shah, India

Age Group: 11-14 Years

Introducing an advanced solar panel cleaning system with a smart algorithm and Machine Learning to detect dust, a camera-activated cleaner with microfiber brushes and water spray thoroughly cleans and dries the panels at 6:30 am, ensuring optimal performance.



#### **Guardian Glove**

L. Abhilash, Adam, India Age Group: 11-14 Years

gloves Innovative smart empower blind and sick greater individuals with independence. They alert users to dangers, enable emergency calls, and feature a heart rate monitor. A built-in sound system helps visually impaired users navigate safely.



#### **Spellbound Signs**

Alfon Ricardo Lucman,

Indonesia

Age Group: 15-18 Years

An educational game designed for mastering the American Sign Language, featuring six levels each focusing specific alphabet ranges. It helps those who are deaf and their families by optimizing ASL learning through interactive gameplay.



#### Health4All

Mohnish Sai, UAE Age Group: 11-14 Years

Introducing wellness solution built with Arduino Uno for live location tracking wristband or belt, using mobile app for health tracking. It features a BMI Calculator. Nutrition Charts, Healthy Food Recognizer, Virtual Yoga Tutor, and Location & Weather Trackers, for a healthy lifestyle.



## United for Impact, Celebrating Partner Successes in Codeavour



## Codeavour Giving Us the Opportunity to Represent Indonesia on a Global Stage is One of the Most Fulfilling Experience....

"KodeKiddo is dedicated to providing high-quality coding education to Indonesian children. Our partnership with Codeavour has been transformative, advancing winners from regional to global stages, offering invaluable exposure. PictoBlox's intuitive interface has significantly enhanced our students' learning. Codeavour's shift from online to offline events has brought excitement and enrichment, preparing our students for global challenges. We look forward to more collaborations with STEMpedia to help our students excel and grow."









## Sustainable Innovations Leading the Way in Egypt with Codeavour Among Students

"Shagoof's mission is to inspire students through cutting-edge STEAM education. Our participation in Codeavour aligns perfectly with our goals, integrating entrepreneurship and sustainable development into education. Codeavour has given our students hands-on experience in AI, coding, and robotics, essential for their future careers. With Codeavour's support, we've transformed curricula to include robotics and programming, fostering entrepreneurial skills and driving SDG attainment among students."









## India's Brightest Young Talents Shine on the International Stage

"Robofun Lab Academy empowers children with 21st-century tech skills through innovative STEM courses. Ashwin Shah, our esteemed CEO, and I have been passionate supporters of Codeavour. As I've observed, 'Codeavour isn't just a competition; it's a transformative journey igniting passion and excellence.'

Our students have thrived, winning the Champion Changemaker title three years in a row and excelling in both national and international competitions. For us, Codeavour is about growth, creativity, and the joy of innovation."











## Nurturing Young Minds by Bringing More Innovative Educational Opportunities in Algeria

"Al-Jazari Robotics is dedicated to revolutionizing education with robotics, Al, and STEAM programs. Over the past three years, our partnership with Codeavour has been invaluable. 'Codeavour has significantly enhanced education by fostering critical and creative thinking,' said Boulkour. Our students have achieved remarkable success, and we look forward to continuing this collaboration to offer innovative educational opportunities, equipping students with essential coding and problem-solving skills for future success."









## **Spotlight on Regional Excellence: Codeavour 5.0 India**

## Innovation Fiesta in Coimbatore, Igniting Young Minds:

Supported by **IE Skool**, the Codeavour 5.0 Regional event in Coimbatore was held at **Sri Shakthi Institute of Engineering & Technology** on **January 27, 2024**. Over **180 students, parents, and mentors** participated. Expert judges from various STEM fields evaluated projects, highlighting initiatives like **"Health4All"** and **"TWOTHI SEAT 2000"** aligned with SDG goals.



## From Kanyakumari with Genius, The Cradle of Creativity:

Supported by the **Bonifon School of Robotics and AI**, the Codeavour 5.0 Kanyakumari Regional Event took place at **Nanjil Catholic College of Arts and Science** on **February 9**, **2024**. Over **260 students**, **parents**, **and educators** participated, showcasing innovative projects. **15 teams** were selected for India Nationals.



## Hyderabad's Hub of Innovation, Showcase of Sharp Minds:

Supported by **Tecybot**, the event was held at **St. Ann's High School**, **Madinaguda**, on **March 30**, **2024**. Over **170 attendees participated** in showcasing innovative projects. The event fostered knowledge-sharing and collaboration, selecting 16 teams for India Nationals.



## Goa's Gala of Genius, Carnival of Creativity:

The event took place at **Saraswat Vidyalaya**, **Khorlim**, **Mapusa** on **April 5**, **2024**. Over **200** attendees, including students, educators, and enthusiasts, engaged in the event. It showcased diverse talents and creativity, culminating in the selection of **24 teams** for India Nationals.



## Chennai's Chapter of Champions, A Legacy of Learning:

In partnership with **BCT Labs**, the event was held at **Sri Krish International School** on **February 9, 2024**. Over **120 participants**, including students and educators witnessed pioneering projects. The event fostered collaboration and knowledge exchange.



## Kolkata's Conclave of Changemakers, Celebrating Innovations:

The Codeavour 5.0 Kolkata Regional Event, organized by **Boenci Solutions Private Limited**, took place at **PM SHRI Kendriya Vidyalaya Cossipore** on **March 30, 2024**. Projects aligned with SDGs were showcased to an audience of **180+people**. A distinguished panel of judges assessed the projects, fostering innovation and excellence.



## Delhi's Den of Developers, **Building Bridges in STEM at Codeavour 5.0:**

Organized by **GoGlobalWays**, the event took place at **Bhiwani Public School** on **March 25, 2024**. Over **200 participants**, including students, educators, and industry experts, attended. The event inspired collaboration, connections, and new ideas within STEM community.



## Bangalore's Brainstorm, A Symphony of Ideas at Codeavour 5.0:

Organized by **QuGates Technologies**, the Codeavour 5.0 Bangalore Regional Event took place at **New Horizon Public School** on **March 31, 2024**. The event drew around **200 attendees**, featuring projects aligned with SDGs from various schools, fostering an environment of creativity and collaboration.



## Pune's Powerhouse of Innovation, **Gathering of Gurus:**

On My Own Technology (OMOTEC) organized the Codeavour 5.0 Pune Regional Event at The HDFC School, Kondhwa Saswad Pisoli on March 28, 2024. Over 240 attendees, including students and mentors, participated. The event showcased innovative projects, fostering an atmosphere of knowledge exchange and collaboration.



## Ahmedabad's Arena of Aspiration, Sparking Scientific Curiosity:

Supported by **RFL Academy**, the Codeavour 5.0 Ahmedabad Regional Event was held at **Shivashish World School** on **March 28, 2024**. Over **120 participants**, along with parents and mentors, engaged in the event. Innovative projects were presented, creating a vibrant atmosphere of creativity and collaboration, with **11 teams** selected for India Nationals.



#### Kerala's Kaleidoscope of Innovation, Showcased Tomorrow's Pioneers:

With support from **Unique World Robotics**, the Codeavour 5.0 Kerala Regional Event was held at **Marian Academy of Management Studies** on **January 24**, **2024**. Students presented their ideas to an audience of **150+ people**. A panel of **10 judges** awarded outstanding achievements to encourage continued innovation.



## Mumbai's Melting Pot of Minds, Unleashing Potential at Codeavour 5.0

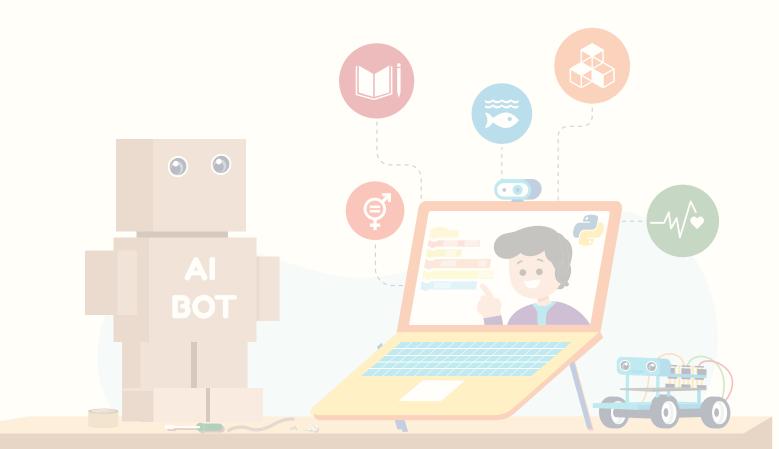
Organized by **QRobotix**, the event took place at **Children's Academy Ashok Nagar, Mumbai** on **March 28, 2024**. Over **500 attendees**, including students, educators, and enthusiasts, participated. The event highlighted innovative projects and fostered knowledge-sharing and collaboration.



### Varanasi Visionaries, Codeavour 5.0's Festival of Future Tech:

In collaboration with **Arque Technologies**, the Codeavour 5.0 Varanasi Regional Event took place on **February 15**, **2024**, at **Sant Atulland Convent School**, **Koirajpur**. The event attracted over **500 students**, **mentors**, **and parents**. A panel of **12 judges** evaluated the projects, selecting **18 teams** for India Nationals





## Journey Across Borders, Beyond Boundaries



United Arab Emirates National:

Advancing STEM Excellence

With support from **Unique World Robotics**, the Codeavour 5.0 UAE National Event took place at **Amity University** on **April 27, 2024**. Featuring **120 teams** from over **15 schools**, it attracted **600 attendees** and enriched STEM education in the region. **32 teams** qualified for the International Showdown in Dubai





### Indonesia National: Jakarta's Innovation Showcase

**KodeKiddo** organized the Codeavour 5.0 Indonesia National, culminating at **ACS School** in **Jakarta on March 9**, **2024**. With **209 teams** and **1,000 participants**, the event featured projects addressing real-world issues.





#### Nepal National: Highlighting Kathmandu

#### Young Innovators in

Neema Education Foundation, supported Codeavour 5.0 Nepal National Event was held in **Kathmandu** on **February 11, 2024**. Event featured **250 attendees** and highlighted projects on climate and healthcare. **20 teams** were selected to compete in the International Showdown in Dubai.





#### **India National:**

#### Showcasing STEM Brilliance in Gurgaon

**STEMpedia** organized the Codeavour 5.0 India National Event at **Alpine Convent School in Gurgaon** on **April 6, 2024**. With **437 teams** and **1,500 attendees**, the event highlighted India's STEM potential and selected **34 teams** for the International Showdown in Dubai.





#### Libya National: Innovating in Benghazi

**Albadhra** hosted the Codeavour 5.0 Libya National Event on **April 13, 2024**, in **Benghazi**. With **180 attendees**, the event showcased innovative projects and collaborative problem-solving skills among the participants.





Algeria National:

### **Showcasing Talent in Constantine** and **Setif**

Al-jazari Robotics organized Codeavour 5.0 Algeria National Event supported by Minister Yacine Oualid and Kamel Bidari. Held in Constantine and Setif in March 2024, the event featured 136 teams and attracted 700 participants. 36 teams were selected for the International Showdown.





### Egypt National: Pioneering Innovations in Cairo

**Shagoof Stemtoys** hosted, the Codeavour 5.0 Egypt National Event, held at **Misr Public Library Dokki** on **November 20, 2023**. With **187 teams** and **950 attendees**, including the **Minister of Youth and Sports**, **41 teams** were selected for the Internationals in Dubai, showcasing innovations in environmental solutions and healthcare.





#### Iraq National:STEM Advancements in Baghdad

Organized by **IoT Kids** with support from **Zain Iraq Telecommunications** and the **Iraqi Ministry of Education**, the Codeavour 5.0 Iraq National Event took place at The Station Establishment, **Karrada, Baghdad**, on **March 8** and **April 12, 2024**. With **214 teams** and **1,000 attendees**, the event highlighted young innovators' creativity and technical skills.





#### Saudi Arabia National: Tech Innovations in Jeddah

Organized by **Kifayat Educational Co**, the Codeavour 5.0 Saudi Arabia National Event took place in **Jeddah** on **April 21, 2024**. Supported by King **Abdulaziz University**, the event saw **300 attendees** including students, mentors and other visitors witnessing the innovative projects and skills of participants.





#### Jordan National: Inspiring Innovation in Amman

Supported by **Robotna**, the Codeavour 5.0 Jordan National Event took place at **Al-Ahliyya Amman University** on **April 24, 2024.** With **269 teams** and **1,200 attendees**, the event facilitated idea exchange and showcased innovative projects. **21 teams** were chosen for the International Showdown in Dubai.





#### Bangladesh National: Innovation in Dhaka

Organized by the **DRMC Science Club**, the Codeavour 5.0 Bangladesh National Event took place on **April 5, 2024**, at **Residential Model College, Dhaka**. The event featured **180 attendees** and showcased innovative projects. **12 teams** were selected for the International Showdown in Dubai.





#### Nigeria National: STEM Excellence in Abuja and Lagos

**Beebahtics Enterprise** conducted the Codeavour 5.0 Nigeria National Event at **STEM Child Care Academy**, **Abuja and Yaba College of Technology**, **Lagos** in **February 2024**. Supported by the UAE Consular General, the event featured interactive sessions and collaborative activities.





### Bahrain National: Fostering Future Tech Leaders

Supported by **Groot STEM Academy**, the Codeavour 5.0 Bahrain National Event concluded at **Horizon Idea Labs** on **April 27, 2024**. The event emphasized STEM skills through interactive sessions, workshops, and discussions.





### Ghana National: Commitment to STEM in Accra

**CKBS Education** organized the Codeavour 5.0 Ghana National Event, demonstrating strong commitment to advancing STEM education despite challenges. Their dedication to fostering innovation and learning remains steadfast.





## Zimbabwe National: **Empowering Youth in Harare**

The **Maker Club** organized the Codeavour 5.0 Zimbabwe National Event, gathering talented youth for coding competitions and tech projects. The event emphasized problem-solving and critical thinking.





### Tunisia National: Cultivating Tech Leaders in Tunis

The **ATAST Association** hosted the Codeavour 5.0 Tunisia National Event, bringing together young innovators and tech enthusiasts. Participants showcased coding and tech skills, fostering creativity and collaboration.





Supported by **Scitech**, the Codeavour 5.0 Syria National Event took place on **April 12, 2024**, **in Aleppo**, with events in **As-Suwayda** and **Damascus**. Over **350 participants** engaged in activities to enhance STEM skills and foster collaboration and innovation.





### Sudan National: Fostering STEM Skills in Khartoum

The Codeavour 5.0 Sudan National Event, organized with The **Orientations Training Centre** on **January 21, 2024**, drew **300 attendees**. The event showcased young innovators' STEM skills, selecting **12 teams** for the International Showdown in Dubai.



## Caribbean Region National: Uniting Innovators Across the Islands

With support from **RSC**, the Codeavour 5.0 Caribbean Region National Event brought together youth from different regions for coding competitions and tech projects, fostering connections and learning.







Director of AI at GEMS Dubai American Academy, Cluster Edu-Innovation Lead at GEMS Education



#### International Showdown in Dubai





The Codeavour 5.0 International Showdown, held on **May 4th and 5th, 2024**, at the **Dubai American Academy**, was a landmark event in innovation and creativity. This prestigious gathering drew the brightest young minds from across the globe to compete in stimulating STEM challenges.

With over **1200 attendees**, including participants, mentors, and supporters, the event was a hub of excitement and anticipation. A total of **250+ teams from 65+ countries** showcased their talents across two dynamic tracks: the Innovation and Entrepreneurship track and the AI Robo City Challenge.

Distinguished guests, including Ilaria La Manna from Studio 5, Duaa AlAali from Fab Lab Bahrain, Bansan Thomas George from Unique World Robotics UAE, Murtuza Sinnarwala from Apple, Dr. Sreejit Chakrabarty from GEMS Education, and Dr. Ishha Farha Quraishy from IFQ Technologies, enriched the event with their insights and expertise.

The Codeavour 5.0 Showdown was more than a competition; it was a celebration of young innovators' potential and the transformative power of STEM education.





## **Crowning The Global Champions**



The Codeavour 5.0 International competition culminated in a spectacular showcase of innovation and technological excellence, celebrating the skills and creativity of young minds globally. This year, **57 teams** from around the world emerged as **champions**, excelling in coding, robotics, and artificial intelligence.

This gathering is famed for its focus on cutting-edge technology and innovation, offering young innovators a chance to interact with industry leaders, engage in hands-on workshops, and explore the latest advancements.

Codeavour 5.0 International stands as a beacon of inspiration and opportunity, continuing to empower and motivate young tech enthusiasts worldwide.

#### **57 TEAMS**

BECAME GLOBAL CHAMPIONS 16 TEAMS
FROM
ELEMENTARY

**22 TEAMS**FROM
JUNIOR GROUP

19 TEAMS FROM SENIOR GROUP



## Architects of Innovation, Evangelists and Ambassadors

Codeavour 5.0 was largely driven by the unwavering support and dedication of our International Evangelists, Teachers, and Student Ambassadors. These individuals played a crucial role in promoting the event, engaging with the community, and spreading the word far and wide.

Their enthusiasm and commitment not only heightened awareness but also significantly boosted participation and engagement. By leveraging their networks and influence, our Ambassadors helped create a vibrant and inclusive atmosphere, ensuring the event's remarkable success and leaving a lasting impact on all attendees. Their contributions were instrumental in achieving our goals and setting a high standard for future events.

#### **Global Evangelist**

Codeavour's International Evangelists are the visionaries driving our mission globally. Their unwavering dedication is cultivating a worldwide community of future innovators and tech enthusiasts. Through their efforts, they are making a significant impact by fostering a culture of creativity and technological advancement among youth.



Ishha Farah Quaraishy
Founder and CEO IFQ Technologies,
Ms. Universe 2019 Solidarity,
Mrs. UAE United Nations



**Pola Misthou** STEM and Robotics coach, Founder Coding Club, GreekCodersK12, Greece



Murtuza Sinnarwala Apple Education Manager at JTRSUAE Innovation Consultant at MSB Dubai Founder Bit & Brick, UAE



Ashi Gaur Principal Alpine Convent School Gurugram Sector 10, Haryana, India



**Duaa Alaali**Fab Lab Manager, STEM Digital
Fabrication Instructor,
Fab Lab Bahrain



Ilaria la manna Senior Education Specialist at Studio 5, Qatar

#### **International Teacher Ambassador**

The teacher ambassadors were the backbone of our Codeavour community, essential to the students' project-making journey. Their unwavering guidance and support bolstered students' confidence at every stage, from brainstorming innovative ideas to presenting polished business pitches before the judges.



Eder Carlos Antoniassi
Professor at
EE Maria das Dores
F. da Rocha, Brazil



Rania Abdelfattah Obeid STEM Director at MSC Smart Learning School, Saudi Arabia



Sofia Mesa Giner Coding Teacher at Cypher Coders, United Kingdom



Marina Myburgh
Director of TEXTBOOKS4U
& Former IT/STEM Teacher at
Crawford College, South Africa



**Nikita Shah** STEAM Educator at Arsha Vidya Nidhi(NGO), SPACE-E-FIC, Siddhivinayak Art Institute, India



**Paulo Torcato** Professor do grupo de Informática, Portugal



**David Ariel Lorronda**Physics Teacher and
Coding Instructor,
Roblox Developer,Brazil



**Besher Hawoot**Founder and CEO of
Tautology, hailing from
Aleppo, Syria



**Alan Taylor** Educational Specialist at STEAMPCA, Kazakhstan



Bhupendra Kumar Jangir Robotics & ATL Incharge at O P Jindal Modern School, Hisar, India



Ala Alahabar Teacher at the Orientations Centre, Sudan



**Uma Janani** Founder of Shree Abu Nigeria



**Zahra Amin Shelke**Founding Head of Innovation and
Digital Learning, Arcadia Global
School UAE



Hazem Mohamed Python & Al Developer, Code Challenge Championship, Egypt

#### **International Student Ambassador**

The student ambassadors played a vital role in guiding their fellow participants, drawing from their rich experiences in previous Codeavour editions. Their insights and expertise provided invaluable support to new participants, boosting their confidence and enhancing their journey in this year's competition.



Samriddhi Kori India



Ana Elisa Brechane Da Silva Brazil



Khushal Davesar India



Mustafa Majeed Iraq



Mazin Ali Ibrahim Iraq



Malak Samir Sudan



Sanvi Madgaonkar India



Sparsh Mahajan India



Atharva Baluja India



Arjun VG India



**Guendouz Mohamed** Algeria



Alexander Santoso Indonesia



**Lionel Timothy**Indonesia



**L.M. Mahir Labib**Bangladesh



Althafazrais Widyanatha Indonesia



Akshay Agarwal India



Stella Lynette Subagio Indonesia



**Shaurya Sinha** UAE

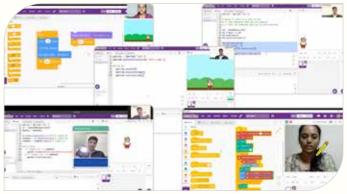
## Training and Doubt Sessions for Our Young Innovators to Excel

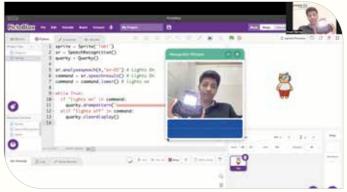


In this edition of Codeavour, we conducted comprehensive training sessions covering AI, Block-based Coding, Robotics, Machine Learning, and Python Programming for our students. These sessions were meticulously designed to provide a solid foundation and hands-on experience in each area, ensuring a deep understanding of the concepts. Following the training, we held dedicated doubt-clearing sessions to address any queries and reinforce learning.

**Al and Coding Bootcamp** with **12 Sessions** were launched officially on the Codeavour International with more than **345 hrs watch time**.











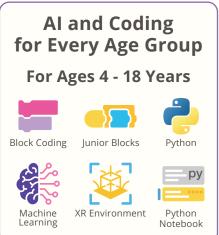


A **3-day bootcamp** was organised for **CARES Goa** students. **40 teams** with around **100 students participated** in the bootcamp to learn and explore all about the Track - 2 of Codeavour 5.0 International.

# The All-New PictoBlox: A Creator Tool for Coding, Al, ML, AR-VR, and Robotics

PictoBlox is a versatile block-based and Python coding platform that works on smartphones, tablets, and laptops. It simplifies hardware interfacing and Al learning, allowing students to create interactive animations, games, robotic programs, Al projects, and IoT applications. With PictoBlox, educational project possibilities are endless.







#### **Introducing PictoBlox's New Game-Changing Tools**

## Junior Blocks for Kids Age 4 - 7 to Make Story and Animations

- 1. Junior Blocks specifically designed for kindergarten, pre-primary, and primary school kids, provides a block coding platform tailored for students to learn Coding and Al.
- 2. It Offers a fun and interactive way for young learners to enter the world of coding, Al and Robotics promoting early computational thinking, creativity, critical thinking and problem-solving skills.

## Python Notebook for Students Age 12 and Above

- 1. PictoBlox Python Notebook enhances the existing Python editor by enabling interactive writing, visualization, and sharing of Python code
- 2. Built on the Jupyter Notebook framework, it combines code, visual outputs, and explanatory text, making it ideal for data analysis, machine learning, and other tasks that benefit from immediate visual feedback.

## In the News: India's Regional and National

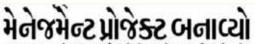
The program garnered significant attention, receiving extensive coverage in multiple newspapers and media including **DD News, ScooNews** and **The Founders Media**, across various regions, including **Delhi, Maharashtra, Goa, and Ahmedabad**. Prominent publications in these areas highlighted the program's initiatives, achievements, and impact on the local communities.

The articles detailed the innovative aspects of the program, showcasing how it fosters educational growth and technological advancement among students. This widespread media attention amplified the program's reach and underscored its importance in promoting **STEM education and inspiring young minds** across these regions.

The coverage included interviews with key stakeholders, success stories of participating students, and expert opinions, providing a comprehensive view of the program's positive influence.







અમદાવાદ : શહેરની 9 વર્ષની હિતિકા પટેલ દુબઈમાં યોજાયેલ રોબોટિક્સ ચેમ્પિયનશિપમાં ફર્સ્ટ રનર અપ રહી. ઈનોવેશન એન્ડ આંત્રપ્રિન્યોરશિપ કેટેગરીમાં હિતિકાએ ગ્લોબલ સ્ટેજ પર પોતાની સ્કિલ પ્રસ્તુત કરી. ઈનોવેશન અને આંત્રપ્રિન્યોરશિપ કેટેગરીમાં હિતિકા પટેલે વેસ્ટ મેનેજમેન્ટ સિસ્ટમ પ્રોજેક્ટ રજૂ કર્યો.



જે પ્રોજેક્ટને હિતિકાએ 'ટ્રેશ ટ્રુપર' ટાઈટલ આપ્યું છે. આ એક AI બેઝડ ગાર્બેજ ડિટેક્શનનું કામ કરે છે. આ વેસ્ટ મેનેજમેન્ટ સિસ્ટમ વિશે વાત કરતા



#### STEMpedia Successfully Completed Codeavour 5.0-India's National Innovation Fest





STEMpedia, in collaboration with ART PARK@IISc, India's premier AI & Robotics Technology Park, established by the Indian Institute of Science in Bengaluru, successfully concluded the national level event of 2023's biggest innovation fest,

#### STEMpedia organises Codeavour 5.0 International

Codeavour 5.0 International is an innovation fest for the next-generation, where participants make innovative projects



Ahmedabad-based EdTech STEMpedia recently organised Codeavour 5.0 International, along with ART PARK@IISc India's first Artificial Intelligence (AI) and Robotics Technology Park, established by the Indian Institute of Science (IISc) in Bengaluru and supported by AI Foundry.

## Worldwide Headlines: Highlights of International Media

The program received widespread media coverage in newspapers across Algeria, Iraq, UAE, India, Jordan and Indonesia. Esteemed publications like Gulf Today, The Better India, Jordan Times, Iraqi Public Opinion, Pan Time Arabia, etc. highlighted its innovative approach and significant impact on education and technology. This international attention underscored the program's role in fostering global collaboration and inspiring young minds across diverse regions.

This extensive coverage amplified the program's visibility but also emphasized its role in fostering international collaboration and knowledge exchange. By bridging geographical boundaries, the program demonstrated its commitment to nurturing a global community of learners and innovators, inspiring countless young minds across continents.

The media exposure in these regions celebrated the program's success in promoting STEM education, highlighting its contributions to the advancing technology and education worldwide.



The United Arab Emirates Consul General in Lagos, Nigeria, Dr Abdulla Al-Mandoos, Yaba College of Technology (YABATECH) Rector, Dr Abdul Ibrahim and Charterhouse Director & Founding head, Mr John Todd will tomorrow, Saturday, March 2 be guests at the National level of Codeavour International Coding & Al championship.







#### India's 15-YO Gold Winner of International Robotics Contest & a Student-Teacher Bond Behind It

Teacher Maya Kamat demonstrated
extraordinary dedication to her student
Usha Kumawat's success in the
Codeavour 5.0 Al Robo City Challenge.
Together, they overcome many obstacles
to ensure Usha's participation and
eventual victory in Dubai.



By Krystelle Dsouza May 23, 2024



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A dream journey to robotic mastery:
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## **Sponsors and Major Collaborators**

#### Motwani Jadeja Foundation

Motwani Jadeja Foundation, led by Asha Jadeja, has been a staunch supporter of Codeavour, enabling us to establish a platform for young innovators. The Rajeev Circle Fellowship Program empowers students with transformative experiences, resources, and opportunities to showcase their work at the prestigious FAB24 event, paving the way for future leaders.

#### Motwani Jadeja Foundation

#### **Amazon Web Services**

Amazon Web Services (AWS) advocates for Codeavour, providing financial backing for budding tech enthusiasts to tackle global issues. The AWS Out-of-Box-Idea Award recognizes innovative ideas from diverse backgrounds, fostering a culture of boundless innovation.



#### **Inventant Education**

Inventant Education supports Codeavour, allowing young innovators to address global challenges. Their partnership bridges educational gaps for underrepresented communities, empowering them to pursue innovation.



#### **Fab Foundation**

Fab Foundation, led by Sherry Lassiter, fosters global innovation through technology access and resources. Collaborating with Codeavour for the FAB24 event in Mexico, the top 20 innovators receive invaluable mentorship to refine projects and expand boundaries in digital fabrication.



#### **Dubai American Academy**

Dubai American Academy partners with Codeavour as the International Venue Partner. Both organizations aim to nurture future leaders, emphasizing a focus on the Future in education to prepare students for leadership, innovation, and entrepreneurship.



#### **Alpine Convent School**

Alpine Convent School, the venue partner for Codeavour 5.0 India National, shares a vision of cultivating global citizens. This collaboration aims to foster 21st-century skills in students, providing a supportive environment for young innovators to thrive.



## Let's Unite to be the Impact Creators!

Our vision is to inspire and nurture young innovators, offering them a platform and tools to explore the realms of AI, coding, and robotics. We are dedicated to driving a positive change.

"Together, let's unite and collaborate, Creating an impact that resonates, Empowering young minds' innovations gate, For a futuristic tomorrow, Let's navigate."



#### **Pioneers of Codeavour's Excellence**



#### **Reach Out to Us**

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