

# STEAM CHAMPIONS UAE

THE BIGGEST ROBOTICS, AI, & ENTREPRENEURSHIP COMPETITION

## Impact Report 2023



**EduStream**  
For Creative Learning

**CLAP**

Center for Learning  
and Advanced practice



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## Champion's Success Story

Mica Ledesma, a STEAM Champions UAE 2022 standout, didn't just compete – she invented! Her project, an app that bridges the communication gap for deaf people in emergencies, exemplifies the competition's spirit.

Using her coding skills, Mica designed a system that recognizes ASL gestures for emergencies and translates them into four languages (verbally and visually) through a connected device. This empowers the deaf community by ensuring clear communication during critical moments.

Mica's innovation stems from a desire for inclusivity. Identifying a lack of mobile ASL translation apps, she created a solution, perfectly aligning with UN SDG 3: Good Health and Well-being. Her story is a testament to STEAM education's power and a beacon of inspiration for future champions.



### Winners

Automate the Surroundings



### Winner

Save the Environment



### Winner

Strengthen the Health Infrastructure



# STEAM CHAMPIONS UAE

The Explore & Innovate: STEAM Champions UAE is a collaborative competition, presented by **EduStream** is an innovative educational initiative designed to empower students across various grade levels with essential skills in **critical thinking, problem-solving, coding, Entrepreneurship and robotics**. Through a series of engaging and competitive activities, students are encouraged to explore the world of technology and innovation while nurturing their creativity and curiosity.

01

Develop an interest in Coding, Artificial Intelligence and Robotics

02

Develop critical thinking, creativity, collaboration and communication – the four C's of the 21st century skills.

03

Develop Problem Solving Skills and Innovation Mindset

04

Become sensitive towards the well being of the world.



# EXECUTIVE SUMMARY

The STEAM Champions UAE 2023 competition, presented by EduStream, successfully ignited a passion for Robotics, AI, & Entrepreneurship across the nation. This report highlights the program's impact on students, its alignment with the United Nations Sustainable Development Goals (SDGs), and the exciting journey from regional competitions to the National Finals.

The competition itself followed a structured approach, fostering a supportive and engaging environment for students:

## Interactive Workshops:

Engaging workshops and training sessions equipped students with the necessary skills and knowledge for each competition stage. These workshops were a crucial component, ensuring students were well-prepared to tackle the challenges presented in their respective categories.

## Regional Competitions:

Each group of participating schools from Sharjah, Abu Dhabi, and Dubai (two locations) conducted its own internal competition. This format provided a platform for students to showcase their creativity, problem-solving abilities, and projects to a supportive audience of peers, teachers, and parents. The regional competitions fostered a sense of community and healthy competition within each geographical area.

## National Competition:

Winners from the regional competitions advanced to the National Finals, held on 25th May 2024 at Amity School Dubai. This stage served as the culmination of the program, bringing together the top talent from across the nation. The National Finals provided a platform for students to showcase their skills on a national level, fostering a spirit of healthy competition and celebrating their achievements on a broader scale. The enthusiastic atmosphere further fueled their passion for STEAM learning and innovation. A panel of distinguished judges evaluated student projects based on creativity, technical skills, problem-solving abilities, and real-world application.

## International Opportunity:

Exceptional students who excelled in the National Competition were offered a unique opportunity to represent the UAE in international STEAM competitions held in China and Mexico. This international platform allowed them to compete against peers from around the world, further developing their skills and gaining valuable exposure to global innovation in the STEAM fields.



### Sponsored Resources:

**EduStream's** commitment to accessibility extended beyond the competition itself. To ensure all participating schools had an equal opportunity to succeed, **EduStream** secured sponsorships to provide essential resources, including hardware, software, and educational materials. This dedication to providing a level playing field was instrumental in fostering participation from a wider range of schools and maximizing student learning across the UAE.



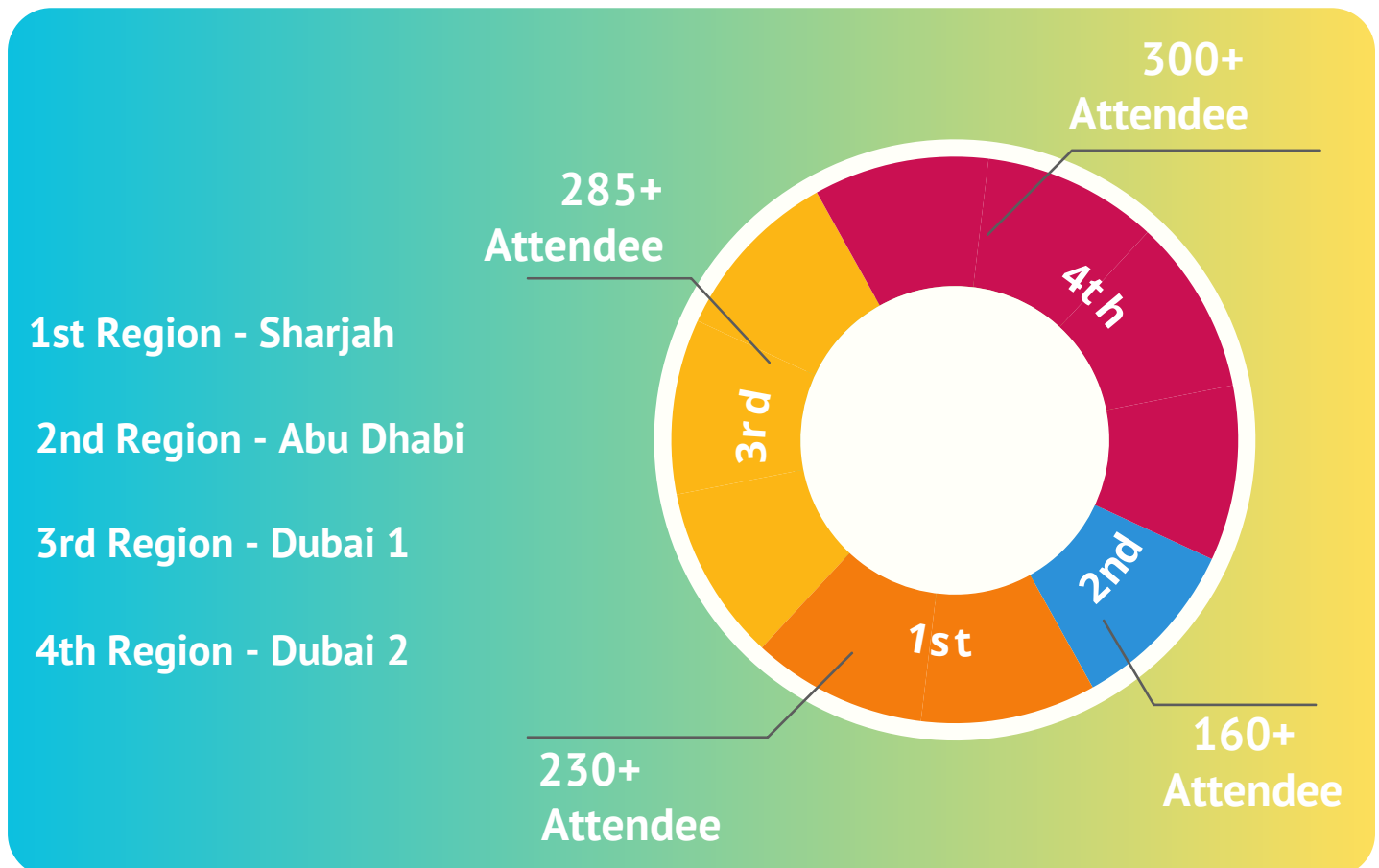
### STEAM Certification:

In recognition of their dedication and participation in the STEAM Champions UAE 2024 program, all participants received a certified participation certificate. This serves as a valuable testament to their achievements and their commitment to STEAM education.

## Regional Competitions Breakdown

The regional competitions attracted a vibrant and enthusiastic audience, with an average of 30+ schools participating and an estimated total attendance of 150-300 attendees per event.

This included not only students (approximately 150-300 students per region) but also teachers and parents, demonstrating a strong commitment to STEAM education across various stakeholders.





# EXECUTIVE SUMMARY

The competition itself followed a structured approach, fostering a supportive and engaging environment for students:

## Enjoy AI Juniors

### KG1 & KG2

This introductory stage engaged approximately 60 students (30 teams x 2 students/team) in a "World Tour" of coding and robotics, laying the foundation for future learning and contributing to SDG 8: Decent Work and Economic Growth by introducing them to foundational coding and robotics concepts.



## Future Engineering Challenge

### Grades 1-3

Students tackled the "Building for Tomorrow" challenge. This hands-on experience challenged approximately 120 students (60 teams x 2 students/team) to use programmable blocks and construction kits to bring their ideas to life, fostering problem-solving skills and contributing to SDG 11: Sustainable Cities and Communities by encouraging them to think creatively about solutions for a sustainable future.



## Enjoy AI Seniors

### Grades 4-6

Designed for Grades 4-6, the "Summer Sports" category challenged approximately 120 students (60 teams x 2 students/team) to delve into robotics and program robots for sports-related activities. This playful approach not only fostered teamwork and problem-solving but also aligned with SDG 3: Good Health and Well-being by promoting the concept of healthy living through interactive robotic activities.





## AI Innovators

### Grades 7-9

The AI Innovators category (Grades 7-9) marked the culmination of the program's focus on innovation. Students tackled real-world challenges using AI and coding, with approximately 120 students (60 teams x 2 students/team) participating. This directly contributed to SDG 9 by demonstrating the potential of these technologies in creating solutions for a better future. Students were encouraged to think critically and creatively to address issues like environmental sustainability, resource management, and education.



## Innovate ED

### Grades 10-12

The Innovate ED category (Grades 10-12) focused on the future of education. Teams of four students tackled the challenge of "Revolutionize Education," encouraging them to think critically and come up with innovative approaches to learning, aligning perfectly with the global goal of ensuring quality education for all (SDG 4). An estimated 80 students (20 teams x 4 students/team) participated in this category. Students explored concepts like gamified learning, personalized learning experiences, and the integration of technology in the classroom.











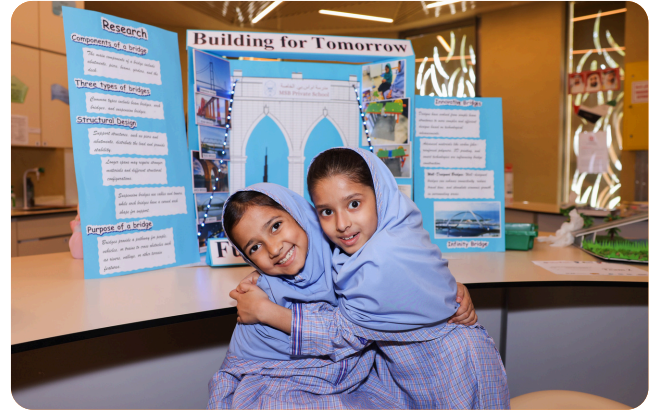
### Amity School Dubai Future Engineers The Eco-Opening Bridge

This impressive creation combined functionality with environmental awareness. Using logic blocks, the student engineers designed a bridge that automatically opens for approaching ships using an IR sensor. But that's not all! The bridge incorporated solar panels, reducing its reliance on traditional electricity and promoting a sustainable future.



### Manthana American School Future Engineers The Gear Up for Action Bridge

This project impressed with its smooth and efficient opening mechanism. By cleverly utilizing gears, the student inventors created a drawbridge that opened and closed seamlessly, ensuring smooth passage for both land and water traffic.



### MSB School Future Engineers The Mighty Mini Drawbridge

Sometimes, big things come in small packages. This miniaturized marvel used clever construction techniques to create a sturdy and functional drawbridge. Despite its compact size, the bridge easily supported the required weight, showcasing the students' grasp of engineering principles.



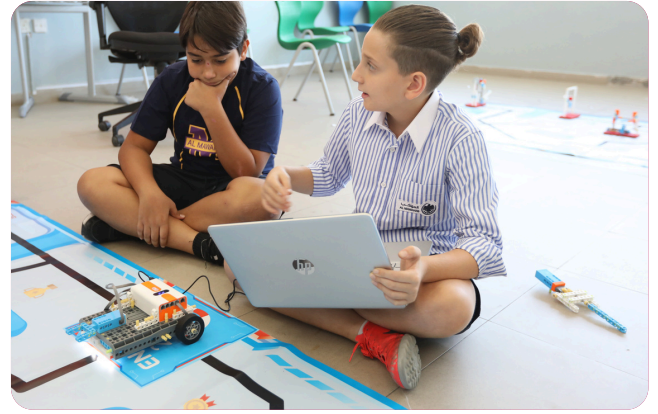
### Ambassador School Dubai Future Engineers The Balancing Act Bridge

This entry prioritized stability without compromising functionality. The student engineers designed a bridge with a unique weight distribution system, allowing it to handle the required weight with ease. The opening mechanism was also well-crafted, ensuring a safe and efficient passage for ships.



## Enjoy AI Seniors

## Programming for Summer Sports Fun!







### Beaconhouse Al khaleej International School

#### Smart Delivery Squad: (Logistics)

Imagine a delivery system that minimizes missed packages and optimizes routes. This is what one team brought to life. Their AI-powered robot navigated a simulated warehouse environment, learning to identify the most efficient delivery paths. This translates to cost savings for companies and a sigh of relief for frustrated customers who no longer have to wait for elusive deliveries.



### GEMS Al Khaleej International School

#### Inventory Management on Autopilot

Keeping track of stock levels can be a logistical nightmare. This innovative project introduced a robot programmed with AI software. This robotic inventory assistant scans shelves, tracks stock levels in real-time, and automatically generates purchase orders when supplies dwindle. This not only eliminates stockouts but also optimizes inventory management, leading to increased profitability for businesses.



### SAIS Dubai

#### Robo-Inspector

Quality control in manufacturing is crucial, but manual inspection can be tedious and prone to error. One team created a robot equipped with image recognition capabilities. This intelligent machine, powered by AI, scans manufactured parts, identifying defects with pinpoint accuracy. The result? Reduced waste, improved product quality, and significant cost savings for manufacturers.



### MSB School

#### AI for a Sustainable Future

Environmental concerns are at the forefront of global discussions. This research project explored the potential of AI-powered sensors embedded in robots to monitor air and water quality. Imagine robots patrolling our environment, collecting real-time data on pollution levels. This data can be used to identify problem areas and trigger timely interventions, preventing environmental damage and safeguarding our planet.







# Empowering Students through Innovative Training Programs



At **EduStream**, we believe in nurturing young minds and igniting their passion for exploration. That's why we offered a comprehensive suite of innovative training programs designed to equip students with the skills they need to thrive in the future.

**Building the Skills for Tomorrow:** Our training sessions covered a wide range of in-demand fields, including programming, coding, AI, robotics, entrepreneurship, and design thinking. These interactive workshops weren't just about acquiring knowledge – they were about fostering creativity, problem-solving abilities, and critical thinking. Students explored new possibilities, learned to collaborate effectively, and gained the confidence to tackle real-world challenges.

## A Smooth Journey to Competition Success:

We understand that participating in a competition can be daunting. That's why we offered dedicated orientation sessions. These sessions provided students with a comprehensive understanding of the competition themes, ensuring a seamless registration process. We also focused on motivating students to think outside the box and develop innovative solutions for global challenges. This early guidance and support empowered them to excel in the competition.

**Clearing the Path to Understanding:** Learning is a journey, and sometimes, roadblocks appear. To address these challenges, we conducted regular doubt-solving sessions. These sessions were strategically timed, often following the completion of a chapter or topic. This allowed students to clarify any concepts they found confusing, saving them valuable time and ensuring a deeper understanding of the material. Our expert guidance enabled them to refine their understanding and eliminate any confusion, propelling them forward on their learning journey. By equipping students with the necessary skills, fostering their creativity, and providing ongoing support, the **EduStream** training programs empowered them to not only compete but to become the innovators of tomorrow.





# Transforming Educators into Coding Champions

**EduStream's** Teacher Training equips educators to inspire student passion for STEAM. We offer in-depth training on core STEAM concepts, separate from student sessions, ensuring mastery before knowledge transfer. Interactive sessions tackle real-world teaching challenges and foster innovation. By building a supportive community of educators, we empower them to become catalysts for the next generation of innovators.





# Previous Competitions



**Codeavour 2022**  
**National**

Codeavour, hosted by **EduStream**, engaged 50+ schools and 600+ students, with 350+ participating offline. Focused on AI, coding, and robotics, the event promoted innovation for UN Sustainable Development Goals. It fostered critical thinking and problem-solving, nurturing young coders and emphasizing STEM education's importance.



**Enjoy AI**

**EduStream** proudly hosted the ENJOY AI robotics competition, witnessing kids' excitement for STEM. Our cutting-edge kits empowered young talents, fostering their passion for robotics. Such events are pivotal for shaping STEM education's future, sparking lifelong curiosity. **EduStream** remains committed to supporting these initiatives, driving innovation and learning among the youth.



**World Water Day**

**EduStream** collaborated with a leading UAE university to celebrate World Water Day, engaging over 100 participants. Through workshops on Robotics, Coding, and more, beginners learned basics while advanced students crafted innovative water-saving projects. The event culminated in a competition, with 25+ winners showcasing exceptional innovations. It highlighted **EduStream's** commitment to education, technology, and fostering creativity for a sustainable future.

# Our partners



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AMERICAN  
SCHOOL



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1981  
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taaleem  
inspiring young minds



مدرسة جيمس ليجاسي  
LEGACY SCHOOL

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مدرسة الرسالة الأمريكية الدولية  
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Dubai American Academy



Dubai National School



مدرسة الألفية  
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A GEMS SCHOOL



مدرسة وينشستر  
The Winchester School



جيمس مودرن أكاديمي  
GEMS Modern Academy



مدرسة جيمس نيو ميلينيوم الخليل  
GEMS New Millennium School  
AL KHAIL



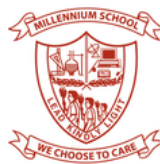
Founders School



أكاديمية رأس الخيمة  
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مدرسة المستقبل الدولية  
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INTERNATIONAL SCHOOL  
OF CREATIVE SCIENCE



# 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.”**



## Reach Out to Us



+971 503826863  
+971 4 2280177



[www.edustream.ae](http://www.edustream.ae)  
[info@edustream.ae](mailto:info@edustream.ae)



P.O. Box: 91926  
Office. NO.: Dubai, UAE