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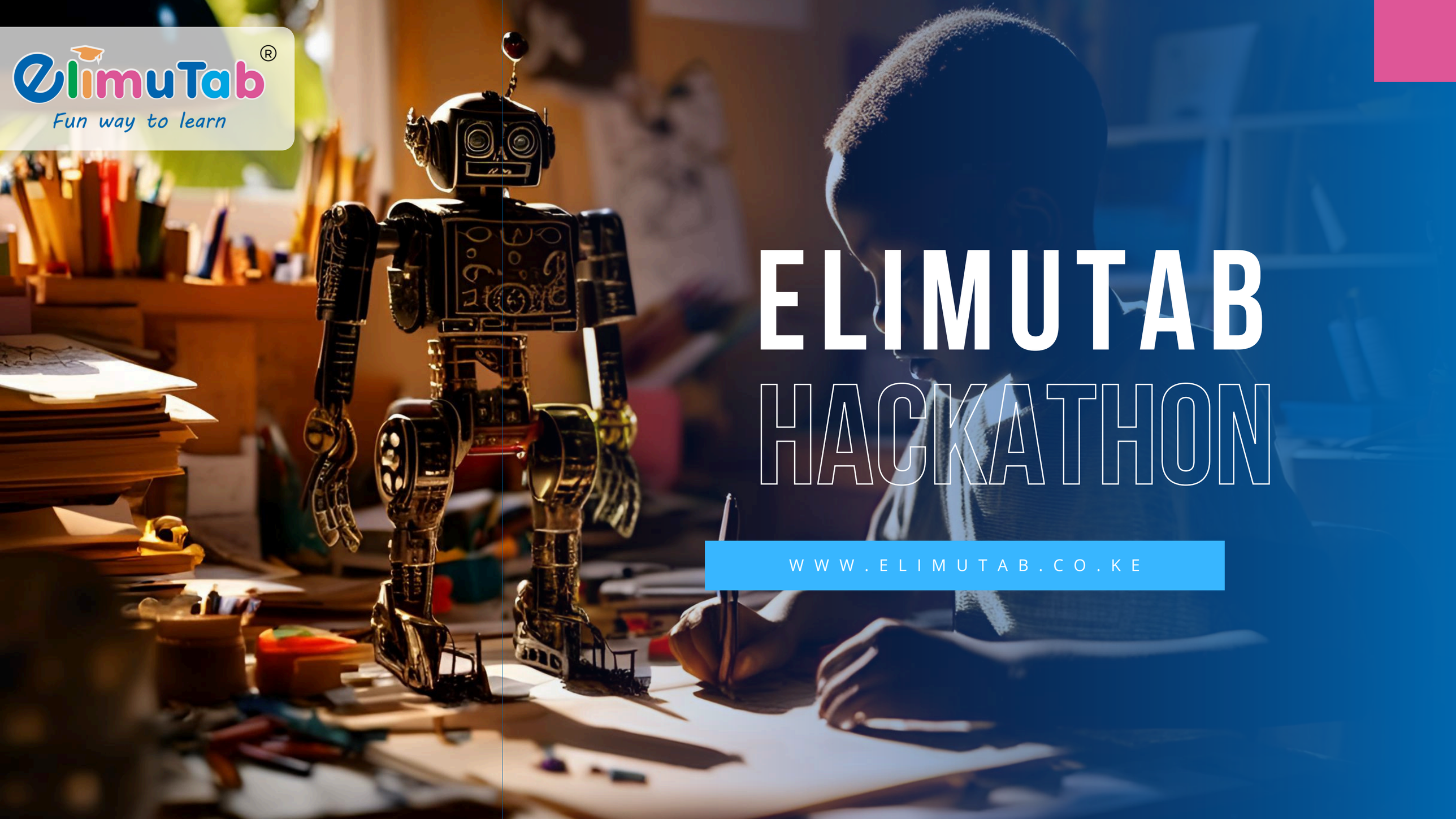

ELIMUTAB HACKATHON

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HACKATHON OVERVIEW

GOAL

Platform for learners to explore

- **AI**
- **Robotics**
- **Coding**
- **STEAM**
- **IoT.**

FOCUS

Innovation, talent showcase, and practical skill development.

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MAIN CATEGORIES

01 AI

Simplify AI concepts (generative, conversational, predictive) for young learners.

01 STEAM

Integrated curriculum for practical, social, emotional, and communication skills.

01 CODING AND ROBOTICS

- Test programming skills on real projects.
- Observe problem-solving and teamwork.

01 IoT

Explain Internet of Things in simple terms for learners.

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ALIGNED TO SUSTAINABLE DEVELOPMENT GOALS (SDGS)

SDG 7: Affordable & Clean Energy

- Use solar power for water purification and energy storage.

SDG 6: Clean Water & Sanitation

- Address clean water scarcity in slums and rural areas.
- Prevent waterborne diseases during floods and droughts.

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CHALLENGE
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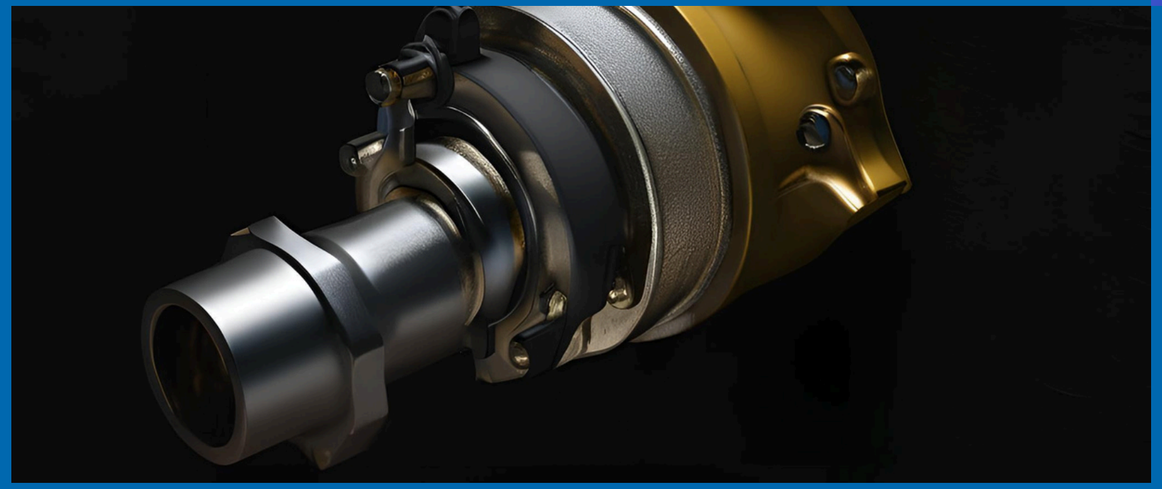
OBJECTIVE

Solar-powered water purification system using distillation.



HOW IT WORKS?

- **Automatic valve fills tank.**
- **Steam is captured and stored as clean water.**
- **Cartridge heater boils water.**

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CHALLENGES BY AGE GROUP

CHALLENGE 1
(Ages 4-17)

Automate water purification and energy storage logic using Scratch or other languages.

CHALLENGE 2
(Ages 4-17)

Create an animated/drawn campaign on clean water and energy using Scratch or other tools.

CHALLENGE 3
(Ages 9-17)

Develop an interactive lesson on clean energy and water using software tools.

CHALLENGE 3
(Ages 9-17)

Use Raspberry Pi or similar to:

- Track energy collected, used, and water purified.
- Send data to a central database via mobile network.

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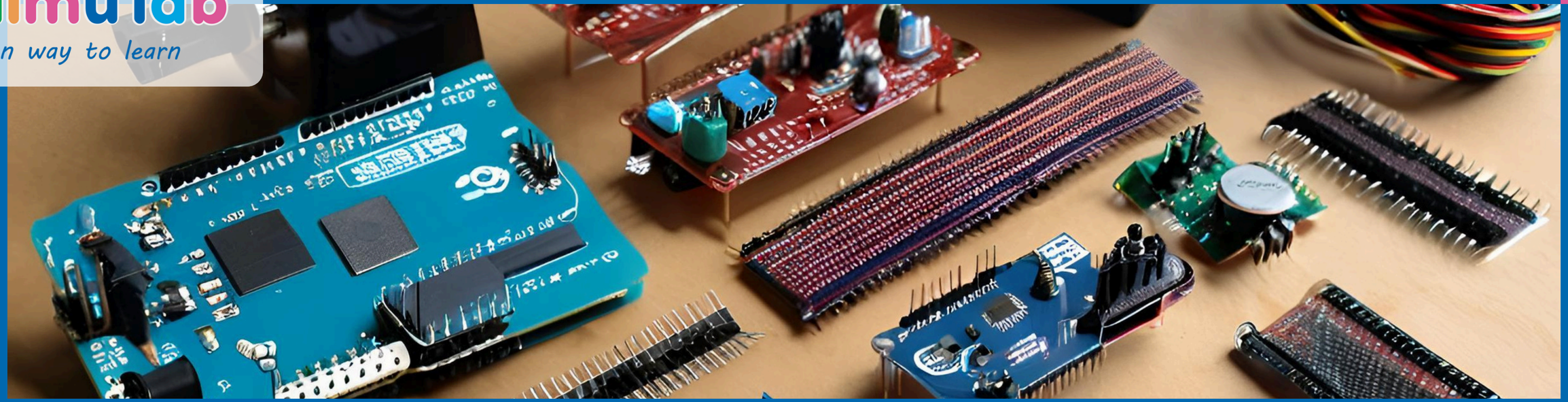

TOOLS & RESOURCES

01 Block-based programming tools.

02 Arduino IoT Kits.

03 Tablets & PCs for practice.

04 Smartboards (e.g., Raspberry Pi).

05 Programming languages: Java, Python (entry to advanced).

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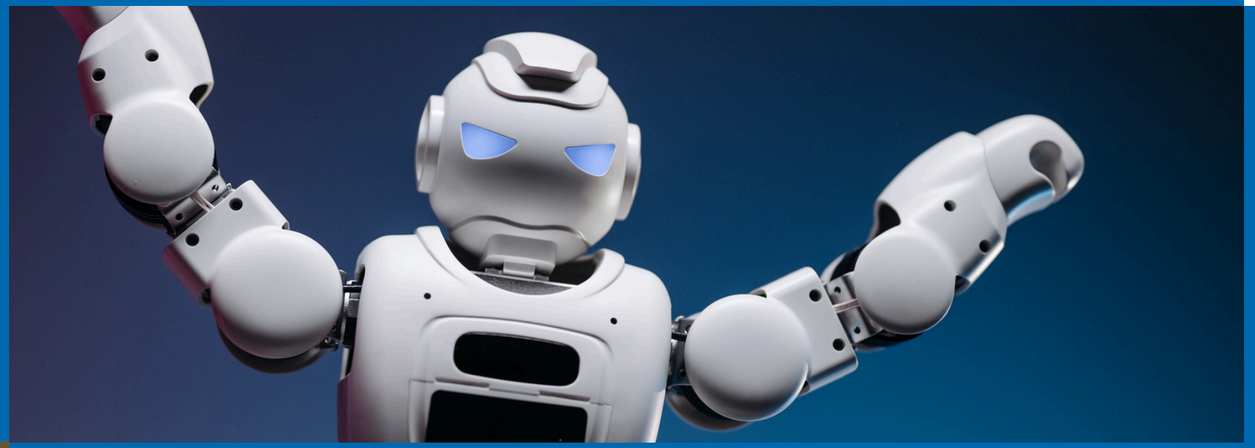
IDEATION FOCUS



Learners showcase solutions using:

- **Digital Literacy**
- **Critical Thinking**
- **Collaboration**
- **Creativity**
- **Communication**

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HACKATHON VALUES & BENEFITS

- Learn new technologies (AI, IoT, etc.).
- Solve real-world problems creatively.
- Identify and nurture talent for future careers.
- Recognize and award outstanding schools and learners.

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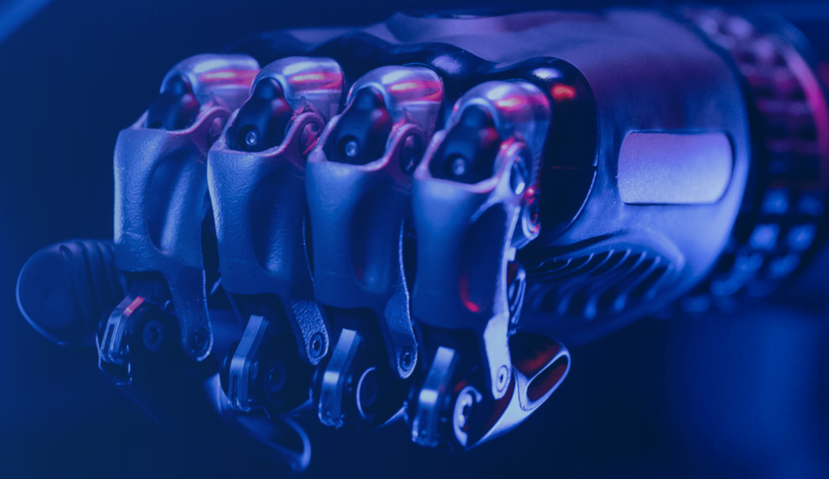
THANK YOU

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