Young African innovators turned pressing community challenges into artificial intelligence solutions on Tuesday, July 28, as Rwanda hosted a continental AI hackathon aimed at preparing the next generation of technology creators.

The Pan-African Informatics Olympiad (PAIO) 2026 Generative AI Hackathon brought together secondary school students and university computer science students from across Africa for a 12-hour challenge to design and present AI-powered solutions addressing challenges in areas including agriculture, energy and technology.

The event, organised by the African Olympiad Academy (AOA) and the Rwanda Olympiad Foundation, in collaboration with partners including Google DeepMind and Rwanda's Ministry of ICT and Innovation, focused on expanding access to advanced AI tools and encouraging African youth to develop solutions shaped by the continent's own needs.

Organisers said the initiative reflects a broader effort to move Africa from being mainly a consumer of technologies developed elsewhere to becoming a creator of globally relevant innovations.

"What we see most of the time when people talk about AI is that they are talking about using it, they are talking about being consumers of products," said Gaidi Faraj, head of school and co-founder of the African Olympiad Academy.

"What we are talking about is how do we train the next generation that is actually going to create the AI tools."

The hackathon was held alongside PAIO, Africa's premier secondary school informatics competition, which this year involved participants from 22 African countries, with some attending physically in Kigali and others participating online.

For young participants, the competition provided an opportunity to apply artificial intelligence to problems they see in their communities.

Moretlo Rapitso, a Grade 11 student from Lesotho, said her team focused on agriculture because of the sector's importance to many African economies.

Moretlo Rapitso

“We rely on the agricultural sector because it is how we live as Africans,” Rapitso said. “It is better to spot the problems in the sector so that we can improve the standard of living.”

She said exposure to generative AI changed her understanding of how technology can be used.

“Coming here and learning about generative AI has shown me that there are other ways in which we can solve problems,” she said.

Another participant, Niyodusaba Adrien, a computer science master’s student at Georgia Tech, led a team developing PowerParse, an AI-based platform designed to help users better understand electricity outages.

The project uses official electricity information to help users determine whether an outage is planned or unexpected and provide guidance based on historical patterns.

Niyodusaba said the idea was inspired by challenges experienced by households and businesses that depend on reliable electricity.

“If you are, for example, a shop owner and you have a fridge filled with milk, ice cream and other products that can spoil, it would really damage your business not knowing when the outage is going to be resolved,” he said.

He said AI is changing the role of programmers by reducing the amount of time spent writing code and allowing more focus on identifying problems and designing solutions.

“Everyone is going to be able to write code, but figuring out what needs to be written is going to be the new valuable skill,” he said.

Uwase Thierry, founder, technology entrepreneur and Harvard Business School student, said Africa’s challenge was not a shortage of talent but unequal access to opportunities.

“Talent is universal, but opportunity is not,” said Uwase, who studied civil and environmental engineering at Stanford University and has worked as a technology founder and in venture capital.

He said the hackathon was created to provide talented African students with access to tools, networks and opportunities that can help them compete globally.

“We don’t want to showcase shelf services. We want to showcase something that can transform lives and actually build on a larger scale,” he said.

Jadal Williams, a robotics and computer vision researcher and co-founder of Changemakers Convening, said access to advanced AI technologies remains uneven around the world.

“Large language models, generative AI, ChatGPT, they’re the hottest topics right now,” Williams said. “Yet access to these tools is not equally distributed.”

He said the hackathon was designed to help bridge that gap by allowing African students to experiment with powerful AI tools and develop solutions based on local realities.

Organisers said building a sustainable artificial intelligence ecosystem in Africa would require stronger investment in education, research, entrepreneurship and industry partnerships.

Faraj said competitions such as PAIO help identify talented students early and provide them with deeper foundations in mathematics, computer science and AI.

“Some things have to be very targeted and deliberate towards a certain type of student,” he said, arguing that highly talented students need support to develop their abilities further.

The hackathon concluded with the announcement of winning teams.

First place went to **Ctrl + Alt + Generate**, whose members were Cyuzuzo Pacifique, Miracle Nanen Mbanaade, Ntwali Rwilima Eloi Miguel, Jed Oloo and Oda Kalene Tuyishime.

Second place was awarded to **Loss Function Junction**, comprising Evode Muyisingizemwese, Chaste Ganza, Ash Diop, Brian Muhizi and Michael Quaicoe.

Third place went to **Temperature 2.0**, featuring Thabolezwe Mabandla, Saddy

Nkurunziza and Lightness Pigiliano.

For organisers and participants, the Kigali hackathon represented more than a technology competition. It was part of a wider effort to build an African pipeline of innovators capable of using artificial intelligence to solve challenges facing communities across the continent and contribute to the global technology landscape.