

Conference Report

InnovateHer STEM Outreach



INNOVATE HER STEM OUTREACH EVENT

ACCRA GIRLS SENIOR HIGH SCHOOL,
ACCRA GHANA 🇬🇭

February, 2025

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Background and Rationale

High school enrollment in Ghana has seen significant growth in recent years, with an enrollment rate of 97% at the basic level and 75% at the high school level in 2021. However, despite this increase, only 12% of students are engaged in STEM-related subjects¹². This gap in STEM participation prompted the need of the Innovate HerStem Outreach event, aimed at inspiring and encouraging a diverse group of students to pursue STEM-related courses, particularly in Artificial Intelligence and Machine Learning.

Through this event, participants gained access to specialized mentoring programs designed for girls in STEM. They also received guidance on the prerequisites for pursuing careers in STEM fields and learned about tertiary institutions offering programs aligned with these career paths. Our initiative is part of a broader effort to support the development of Ghana by increasing STEM engagement at the high school level and fostering more inclusive and diverse scientific communities. We collected feedback from participants after the event to gauge how it inspired them to pursue STEM-related courses at the university level.

Target Audience

Our target audience was senior high school students (Year Two) at the Accra Girls Senior High School, representing a wide range of specialisations, including General Science, General Arts and Business. Approximately 200 students participated in the event, making it an engaging and diverse gathering for fostering interest in STEM.

Main Event

The event began with a welcome address by Dr.Tabiri (Mathematician at AIMS Ghana and Founder of Femafricmaths), who introduced the various organizations involved and outlined their roles in promoting

¹ [Ghana GH: School Enrollment: Secondary: % Gross](#)

² [Challenges to the implementation of STEM education in the Bono East Region of Ghana](#)

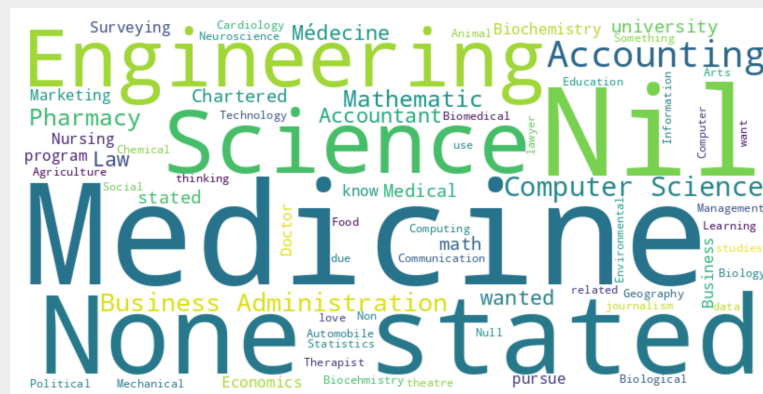
STEM education. Dr Tabiri also shared the mission of the Innovate HerStem Outreach and emphasized the importance of encouraging students, particularly girls, to explore careers in STEM fields. Following the welcome, Abigail Annkah, a software engineer at Google Accra, delivered an insightful talk introducing Artificial Intelligence (AI). She explained what AI is, how it works, and its significance in today's world. This was followed by a session on the applications of AI, presented by Deborah D. Kanubala, co-organizer of WiMLDS. Deborah explored the various fields where AI is applied and discussed its growing impact on industries. Next, Dr. Angela Tabiri led a session on the application of mathematics in AI, highlighting the crucial role of mathematical principles in AI development. Throughout these sessions, each speaker shared their personal journeys, providing motivation and inspiration for the students. The event also featured several Q&A sessions, where students engaged with the speakers, asking questions about programs and career paths they could pursue to become AI engineers or specialists.

Feedback

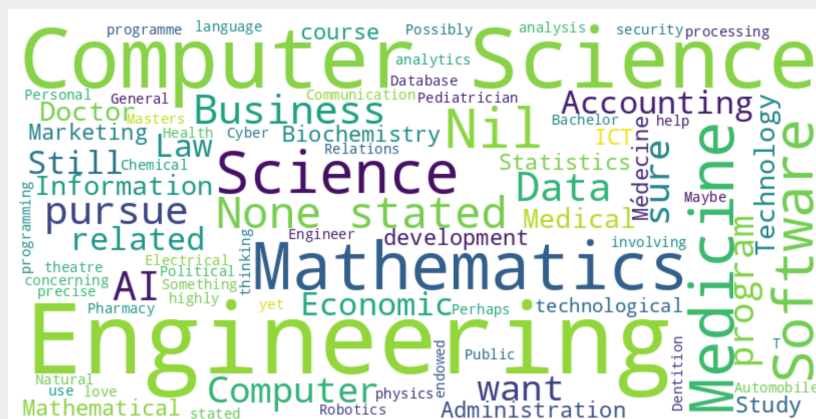
To gather insights from the students, we distributed questionnaires to collect feedback on the event. The questionnaire was provided in hard copy format as students are not permitted to use phones at school. Afterwards, we entered the completed questionnaires into a Google Form. We have summarized the key takeaways from the feedback below and more details in the [Appendix](#).

A key observation from the feedback was the shift in students' intended courses. Initially, many students were interested in pursuing medicine, business, and engineering. However, following the event, there was a notable change, with a significant number of students expressing interest in Computer Science and related fields, particularly AI, data science, and software engineering. This shift highlights the impact of the event in inspiring students to explore STEM and technology-related career paths.

Question: If yes, what was the initial program you wanted to pursue at the university?



Question: What study program do you want to pursue now?



Future follow ups

We collected contact details from the students' parents and plan to reach out to them over the next 1–2 years to monitor the progress of the participants. This follow-up will help us assess the long-term impact of the event and share meaningful insights.

List of Partner Organizations

The outreach program was successfully organized by the following organizations/community groups:

- WiMLDS Accra
- African Institute of Mathematical Sciences (AIMS) Ghana Girls in Mathematics and Science Program (GMSP)
- FemAfricMaths
- Google (Resource person and financial supporter)

Appendix

I. List of Organizers

Name	Organization Team
Dr. Angela Tabiri	AIMS GMSP / FemAfricMaths
Khadija Iddrisu	WiMLDS Accra
Rahmat Akintola	WiMLDS Accra
Emefa Duah	WiMLDS Accra
Amina Salifu	WiMLDS Accra
Miriam Ocloo	WiMLDS Accra
Ubaida Abdulai	WiMLDS Accra
Salomey Osei	WiMLDS Accra
Deborah D Kanubala	WiMLDS Accra

II. Agenda

Time	Event	Presenter(s)
1:00 - 2:00 pm	Arrival to School	All
2:00 - 2:10 pm	Introductions to organisations	Abigail Annkah, Dr. Angela Tabiri, Deborah D. Kanubala
2:10 - 2:30 pm	Talk 1 - Introduction to AI	Abigail Annkah (Google, Ghana)
2:30 - 2:50 pm	Talk 2 - Applications of AI	Deborah D. Kanubala (WiMLDS Accra, Saarland University-Germany)
2:50 - 3:10 pm	Talk 3 - Applications of Mathematics	Dr. Angela Tabiri (AIMS Ghana, Femafriemaths)
3:10 - 3:15	Closing Remarks	Dr. Angela Tabiri
3:10 - 3:30 pm	Questionnaire and souvenir distribution	All

III. Photos/Videos Gallery

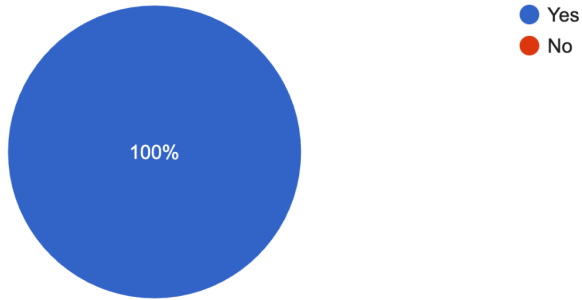




VI. Summary of Feedback

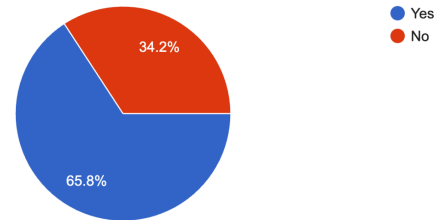
Was this program beneficial to you?

155 responses



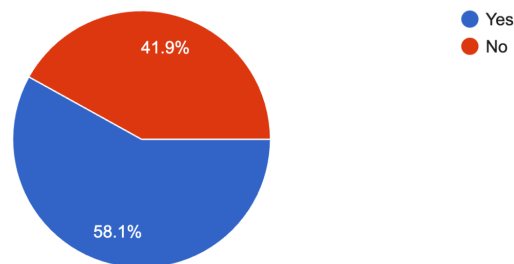
Did you know about Machine learning/Data Science or exciting applications of mathematics prior to this program?

155 responses



Has this program changed your future plans in terms of program choices at the university?

155 responses



Appreciation

We extend our heartfelt thanks to the Biochemical Society for your generous support. Your commitment made our outreach event a resounding success, and your support will have a lasting impact on the lives of many young girls in the coming years. Your partnership not only helped bring this initiative to life but also inspired hope and empowerment among future leaders in science. We are deeply grateful for your vision and dedication, and we look forward to building on this success to create even more opportunities for growth and learning.

