

ANNUAL REPORT 2022



Prepared By:



**APPS
AND
GIRLS**

A Word From CEO

Dear Apps and Girls Community,

Greetings!

It is an honor to express my gratitude to each and every one of you for being a consistent source of support. Working and interacting with each of you, together with a terrific, self-driven crew, is an honor for me. What a visionary year this has been! The holidays have begun, and 2023 is drawing near.

I want to start off by wishing you and your families the best of luck. As 2022 comes to an end, I'd like to take this chance to reflect on a year that transpired quite differently than anyone could have predicted. It undoubtedly presented a number of challenges, but it also demonstrated our organization's resilience in the face of adversity.

We are happy about the successes and opportunities our girls have been able to secure since joining us, and this report includes project milestones, challenges, accomplishments, and stories of our girls. We are overjoyed to witness these beautiful girls, who were adopted by us as young girls, growing wings and mastering independent flight.

Our work is more crucial than ever in the modern world, especially in light of the profound effects that technological breakthroughs are having on occupations and services. In order for girls and young women to flourish in the job of the future, we want to provide them with the necessary skills. We want more young girls and women to take advantage of technological breakthroughs while also making a positive contribution to the world.

Have a nice, restful holiday with your loved ones, and a happy New Year! May it be filled with exciting opportunities and new ventures! We are excited and looking forward to a successful 2023.

Stay safe, stay healthy, and Happy Holidays!



Carolyne Ekyarisiima, CEO



Carolyne Ekyarisiima



To my team: I've been thinking about the things I have to be most thankful for. I want to express my gratitude to each and every one of you for your enthusiasm, diligence, teamwork, and—most importantly—for giving the apps and girls community with superb outside-the-box services. I am proud and inspired by how our organization overcame the difficulties we had last year, and I can't wait to watch you flourish in the upcoming year. Once more, I appreciate your enormous contribution.

About Us

Apps and Girls is an East African award-winning social enterprise founded in 2013 that empowers girls and young women to create the world they want to live in using technology. At Apps and Girls, we give girls and young women the skills and a platform to become effective tech-entrepreneurs, including high-quality software and hardware programming. We focus on girls and young women from both privileged and underprivileged backgrounds, at secondary school, university, or out-of-school, on our mission to reduce the gender gap in ICT, tech-entrepreneurship and empower more change-makers in East Africa.

We believe that Tech is the reality of the future as we move deeper into the digital revolution, and entrepreneurship is a driving force. We work to break various barriers that hinder girls & young women in ICT such as a non-existent support system, lack of role models, and prevailing gender stereotypes by providing the alternative, a supportive path into the field of ICT, and a future in tech.

This report shows Apps and Girls projects milestones, challenges, and achievements over a year (2022) and highlights all the programs and activities.

Vision

Our vision is to see Girls and young Women empowered by ICT to create the world they want to live in.

Mission

Our vision is to see Girls and young Women empowered by ICT to create the world they want to live in.

What We Do

Apps and Girls' overarching objective is to invest in girls and young women as potential tech entrepreneurs, tech creators, tech role models, and leaders, in Tanzania, Uganda and across Sub-Saharan Africa.

To achieve this goal, Apps and Girls is implementing an innovative cyclical process of advanced coding training, entrepreneurship training, mentorship, and incubation, thus promoting girls' and women's equal participation in the digital economy: as creators of tech and drivers of innovation that are also gender-sensitive.

Our Objectives

- Provide coding and Entrepreneurship training to girls in secondary schools across Tanzania, Uganda and bordering countries.
- Create an accessible learning space for students to create innovations both offline and online.
- To reduce the digital gender gap and help more girls to pursue a career in science, technology, engineering, and math (STEM).
- To create a network of young female digital enthusiasts, innovators, and champions driving change in their respective communities
- To contribute towards achieving SDG goal number 4 Quality Education and 5 Gender equality.
- To assist mentees to transform their ideas into actual products and services and provide indispensable resources to mentees
- To support the successful launch and scale-up of IT-based enterprises or mentees' projects.



Girls from Uganda during the robotics bootcamp

Our Programs

Our core programs are categorized into two key areas, as indicated below:

Quality Coding Training Program

Students learn how to create web and mobile based applications by using different computer coding languages in coding clubs established in their respective schools, but apart from that, they will also be provided with business and entrepreneurship skills that will enable them to come up with tech-related business innovations in their respective communities.

Robotics Program

Weekly hands-on robotics training to encourage problem-solving skills, engineering concepts, creative thinking, and a healthy sense of competition that drives innovation from students. Apps and Girls has been the organization that trains and manages the two national teams (Uganda and Tanzania) that represent the two countries in the FIRST Global Robotics Competition since 2017 in Tanzania and for the last three years in Uganda.

Technology & Innovation Events

For girls in secondary and high school in East Africa, we arrange a variety of activities, including workshops, exhibits, hackathons, Girls Code Camps, boot camps, and the Girls Entrepreneurship Summit.

At these events, girls get together to network, learn, and create innovations and solutions to community problems.

01. EMPOWER



Girls from Alpha High school working on their project at the Girls In ICT Day

Our Programs

Our core programs are categorized into two key areas, as indicated below:

02. ACCERETATE

Jovia Program

Advanced IT and Entrepreneurship training for underprivileged out of school girls and young women to be able to compete in the ICT sector, secure employment or create their own tech-based enterprises.

Mentorship and Incubation

Apps and Girls provides both offline and online mentoring and incubation support to budding young female TECH entrepreneurs in Apps and Girls programs over a period of three to six months. These young entrepreneurs have access to essential resources to support the successful launch and scale-up of their IT-based entrepreneurship startups, such as support for business plans, financial modeling, product development etc.



Jovia program young women during the session at our hub

CODING CLUB – TRAINING PROGRAM

In 2022, our training programs were implemented in 2 phases, where we started with 6 regions (Dar es Salaam, Morogoro, Mwanza, Arusha, Dodoma, and Zanzibar) in phase 1 comprised of 58 schools at the beginning of the year, then broadened our scope by adding more regions in phase 2; ie. Kilimanjaro, Iringa, and Tanga. During the implementation, we were able to reactivate the previous clubs and establish new clubs in tigo eschools and other slected schools making a total of 75 coding clubs in all 9 regions where a total of 1503 students learnt coding and entrepreneurs every week during club time in their respective clubs in schools.

Prior to the implementation, we recruited a team of competent trainers of which some comprised of school ICT teachers who participated in our capacity development and Training of Trainer sessions to gain a thorough understanding of the concepts as well as the program's expectations and objectives and coding club curriculum (Digital literacy, 21st century skills, website development and entrepreneurship); and were provided all the necessary training resources for the coding clubs. These trainers were responsible for 1-3 coding clubs in their respective communities, where they delivered the coding club curriculum and facilitated mentorship sessions during the business idea mentorship program.

For special schools in Dar es salaam that lacked the necessary infrastructure but had extremely dedicated and passionate students, such as Dar es salaam secondary school, Jamuhuri school and Gerezani Secondary school which used to teach theory, the Apps and Girls master trainers carried laptops and robotics equipments to those schools every week to support the passionate students regardless of their infrastructure



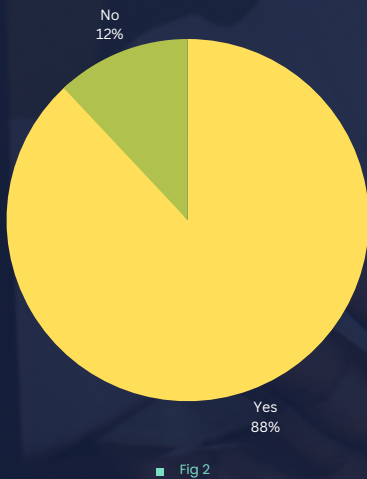
■ Fig 1 A MAP TANZANIA SHOWING NEW AND REACTIVATED REGIONS WERE WE ESTABLISHED CODIGN CLUB

CODING CLUB – TRAINING PROGRAM

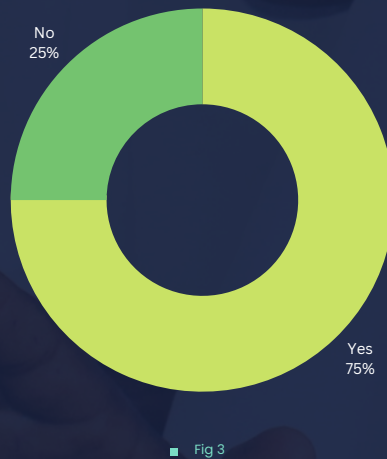
After 5 months of learning, students were digitally literate, had several 21st century skills. The majority of the students were able to use their tech-entrepreneurship knowledge to come up with ideas that use technology to solve community challenges, and they were participating in a series of mentorship sessions that allowed them to shape their ideas so that they could be implemented in real life.

The M&E team from Apps and Girls also conducted a Monitoring and Evaluation of the School Coding Club Program in order to analyze and assess whether the in-school training and mentorship were effective in bringing about change, to understand additional learning needs, and to help us understand what to modify and revise when we return to it once schools resume.

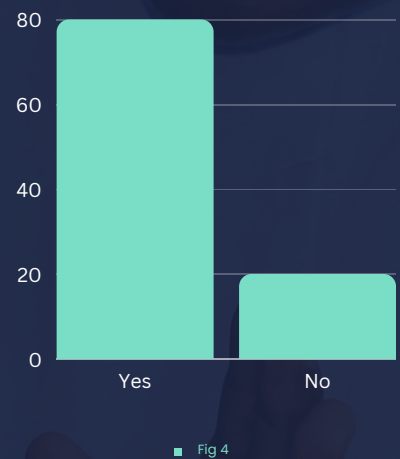
Following the survey results, We found out that 88% of students had mastered webdesign basics and could create their own simple websites, and 75% were able to identify challenges in their communities and create tech-based solutions to solve them which proves that the learners had gained problem-solving skills and our trainers had well delivered the content as they were supposed to do. Lastly, 80% were satisfied with the trainers and mentors we provided to deliver the service to them. However, we also learned that most schools do not have internet access and the presence of defective equipment due to a lack of enough budget for computer repair, which makes it difficult for them to find potential innovations to include in the business ideas they develop which leaves a huge work to the mentor to try to find good, doable and potential innovations for the student's ideas.



Mastery of web design basics and creating own simple websites.



Ability to identify challenges in communities and create tech-based solutions to solve them.



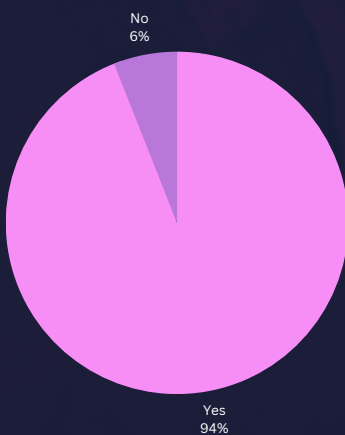
Satisfaction with the trainers and mentors provided to deliver the service to them

IN-SCHOOL WORKSHOPS

Apps and Girls implemented Technology and Entrepreneurship workshops to equip girls with the self-confidence, skill sets, imagination, courage, and vision in young girls so that they can do important things and participate equitably in the Fourth Industrial Revolution, and also to inspire leadership and innovation in young girls. In 2022, we delivered Robotics, Coding, and Entrepreneurship workshops to schools with and without computers in 12 regions(Dar es Salaam, Dodoma, Arusha, Kilimanjaro, Mwanza, Kagera, Tanga, Geita, Tabora, Morogoro, Shinyanga and Iringa), in which we impacted a total of 7795 girls.

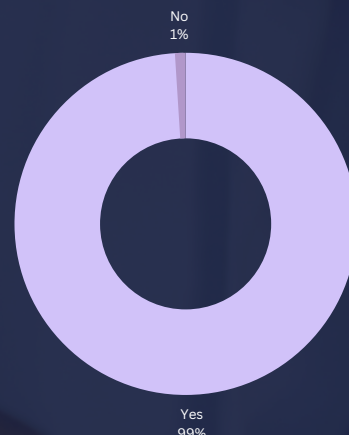
▶ CODING CLUB WORKSHOP

Our team conducted 2-hour coding workshops (website design) for 11 schools with well-established ICT infrastructure and provided guidance, resources, and manuals to ICT teachers on how to continue training the students in Arusha, Moshi, Tanga, Mwanza, Dar es Salaam, Kagera, Morogoro, Geita, Tabora, Shinyanga, The goal was to inspire girls to love technology and to consider using technology to make the world a better place for everyone, from these workshops we were able to reach a total of 445 girls. Many students were unaware of the importance of technology, its applicability, and the various careers they could pursue in TECH prior to the training, but according to the survey results, 97.6% expressed a change in attitude and a clear understanding of the subject, as shown in figure 5 & 6.



■ Fig 5

94% of all respondents were not aware of web-based technologies, and they did not know if they could use technology to simplify and solve challenges facing their community, and after the practical coding training,



■ Fig 6

99% of the respondents were motivated to begin using their school computers to explore and create technologies that can benefit their societies.

▶ **ROBOTICS WORKSHOP**

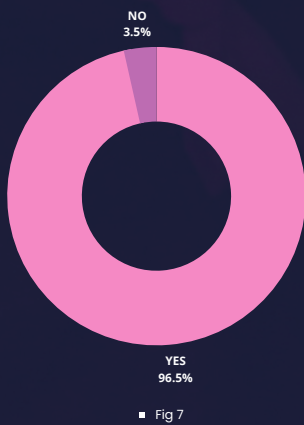
This year we held 20 three-hour robotics workshops for girls and boys in 18 secondary and high schools (with or without computers and electricity) in semi-urban and rural areas across four regions (Iringa, Arusha, Moshi, and Dar es salaam).

We partnered with Lyra in Africa in Iringa, a non-profit organization that owns rural schools with whom we plan to continue working to establish a long-term robotics program in their respective schools.

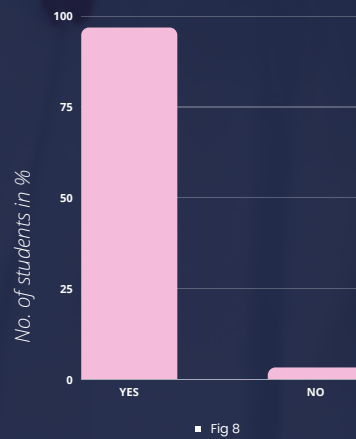
Students were motivated, inspired, and given hands-on experience in assembling and programming robots and their role in the STEM-driven 4IR at these workshops.

According to the survey results, 96.5 % of students who attended the training were highly motivated to pursue or continue studying STEM subjects and courses in school and higher education institutions respectively, and nearly all students (96.8%) clearly understood the importance and application of STEM in their daily lives. as shown in figure 7 & 8.

Has the training inspired you to pursue /continue your studies in STEM subjects/fields in school and university?



After the training , do you understand the application of STEM in your daily life and studies?



Students having fun with a robot after building it during the workshop at Ifwagi Secondary School, Iringa.

IN-SCHOOL WORKSHOP



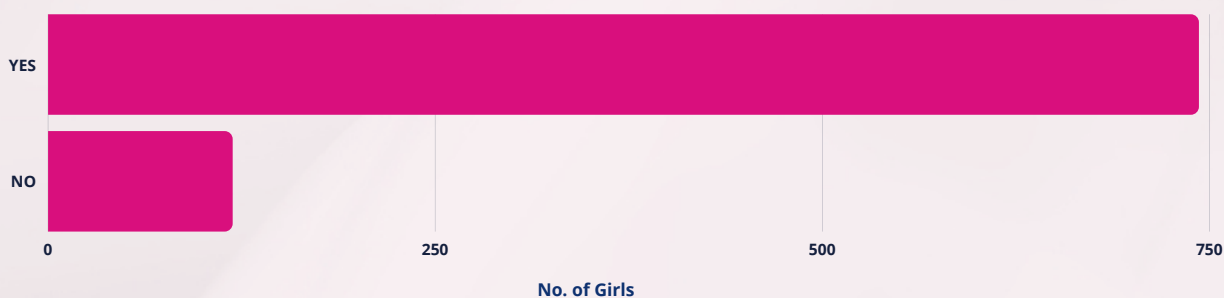
► TECH-ENTREPRENEURSHIP WORKSHOP

In order to groom successful and competent girls and young women, Apps and Girls piloted another women's economic empowerment approach that promotes self-reliance, competence, and employability by introducing Tech entrepreneurship training to girls. The girls learned how to identify problems in their communities and develop tech-based solutions, and as a result of this intervention, they gained problem-solving skills, teamwork, empathy, and communication skills that we believe will help them stand out in their lives.

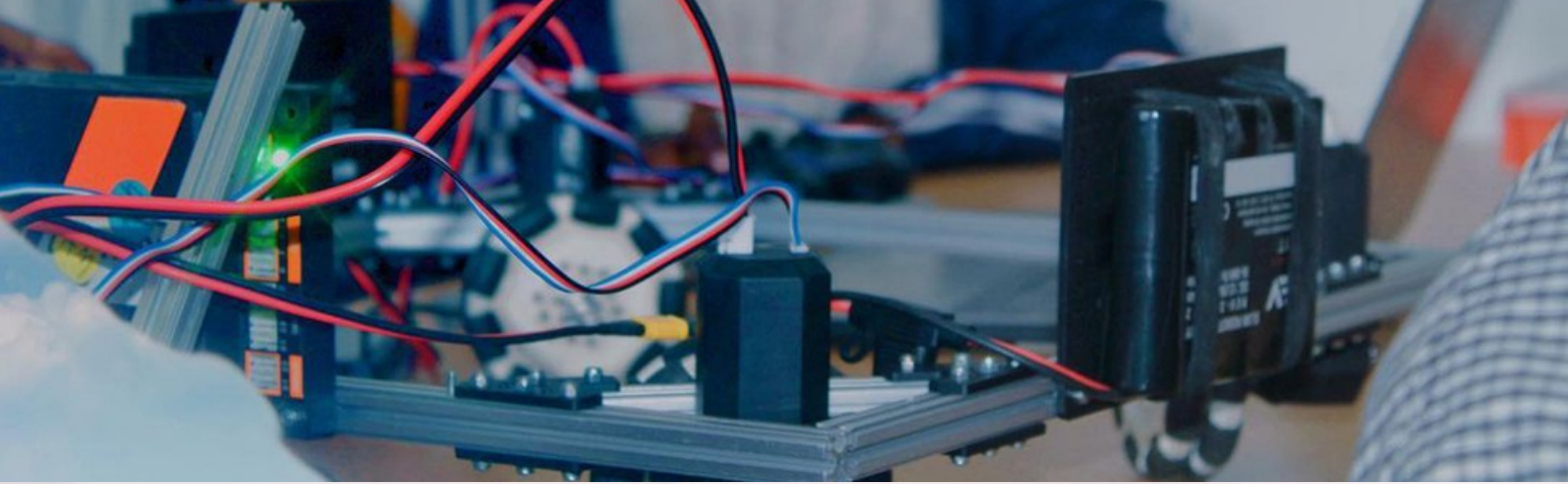
A total of 5781 girls attended 58 tech entrepreneurship workshops in Iringa, Arusha, Kilimanjaro, Tanga, Dar es Salaam, Morogoro, and Dodoma, and 5282 of them developed tech-based business ideas, with 361 of them entering a mentorship program to restructure their business ideas and bring them to life for implementation.

We discovered that the majority of students have a strong desire to be entrepreneurs but lack the necessary skills and guidance, as shown in figure 9 below.

Have you ever wanted to start and run your own technology-driven business?



■ Fig 9



ROBOTICS PROGRAM

Designed for students aged 13 to 18 to learn how to build, program, and use robots to create innovations that solve community problems with the goal of promoting students' creative thinking, problem-solving skills, and innovation. The program gives students an immersive, hands-on learning experience where they can apply fundamental Science, Technology, Engineering, and Math (STEM) ideas to problems that exist in the real world, procedural thinking, pattern identification, and algorithm creation in order to develop step-by-step strategies for problem resolution.

Following the early-year in-school robotics workshops, we chose just 67 students from schools in Dar es Salaam based on their enthusiasm for STEM innovation, dedication to the program, and capacity to participate in additional training sessions at Apps and Girls Hub on Saturdays.

After completing the program, a group of 11 students was retained to train for and compete in the FIRST Global Challenge. Five of these students were chosen to represent Tanzania in the global robotics competition in Geneva, Switzerland, where they took second place as the **winning alliance and were awarded silver medals.**



Team Tanzania was flagged off by Hassanein Hiridjee CEO of Axian Group (Left) and Kamal Okba CEO of MIC Tanzania (Right) at Tigo Tanzania Headquarters before their departure to Switzerland.



Team Tanzania with minister of information, communication and information technology

ROBOTICS PROGRAM

THE 2022 FIRST GLOBAL CHALLENGE: CARBON CAPTURE

Teams worked together to complete tasks in a game themed around one of the greatest challenges facing our planet, including the 14 Grand Challenges for Engineering, in an effort to foster understanding and cooperation among the youth of the world as they use their abilities to solve the world's problems.



Team Tanzania at JNIA Airport arriving back from Switzerland with jubilation !

JOVIA PROGRAM

COHORT 1: WEBSITE DEVELOPMENT



We had the first cohort learning how to design and develop websites using various computer languages, as well as digital literacy, so they can live, learn, and work in a society where communication and access to information are expanding. Furthermore, the trainees spent some time learning and developing business ideas that use the tech knowledge they learned to address community challenges, and after training they entered into a series of mentorship sessions to shape their ideas and help them launch their startups and start operating.

COHORT 2 & 4: GRAPHICS DESIGN



Cohort 2 & 4 focused on Graphic design, where young women spent one intensive month learning graphics design in their respective cohorts, which includes creating visual content to communicate messages via digital platforms, and digital literacy, where they gained skills that will help them promote brands and connect potential customers via the internet and other forms of digital communication.

COHORT 3: PHOTOGRAPHY



Last but not least, we had a group of 14 young women who had the opportunity to learn about photography and who had mastered the professional techniques for taking and editing pictures with digital cameras and smartphones. These techniques included the composition of the content, lighting, use of color, creativity, and the story/inspiration behind the pictures taken. The majority of them were good in almost every category. Depending on what interests them, these young women have mastered working on various types of photography, including food, product, portrait, and corporate photography.

To assess the impact of this program, we conducted a pre and post-training survey in all of the 4 cohorts, and we discovered that the program met and exceeded the expectations of 90.73% of the recruited students, and they have clearly been influenced to recommend this program to other young women out there because it gives them skills that they thought they would never be qualified for, and they would love to see this program reach more girls because the skills can be one way of elevating their income as they will be able to create their own technology-based businesses or increase their competitiveness in the job market.



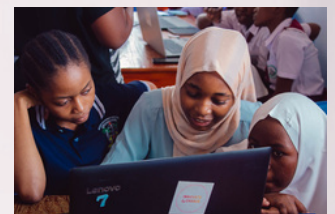
MENTORSHIP AND INCUBATION

The Apps and Girls Mentorship is a three-month program designed to help students from our programs (Coding Clubs, Jovia, Robotics) build viable problem-solving and income-generating startups that will help propel sustainable development in their respective communities and the world at large.

Students are guided through various aspects of business entrepreneurship such as idea generation, pitching, value proposition assumptions, building a product, identifying potential customers, marketing plans and go-to-market strategies, business development, and improving the business model over the course of three phases.

Mentorship in 2022 kicked started with **business entrepreneurship workshop training** across 7 regions in 63 different Schools in Tanzania. A total of **6286** Students were able to attend the workshop training and 5282 Business ideas were generated. Through these workshops, students were taught how to identify problems within their communities and ideate a solution suitable to solve those issues.

The workshop training gave light on a huge number of untapped potentials of brilliant and passionate young girls across Tanzania. But due to challenges like poor environmental infrastructure, we were unable to enroll most of these young girls in mentorship programs since their Schools and environment did not support any of our programs to thrive.



Mentorship sessions were held on a regular basis in Apps and Girls coding clubs schools as per the schools timetable and on Saturdays for students who had no coding clubs in their schools, students went through the Ideation phase, Business development phase, and product development phase. Students enrolled in Mentorship and began attending sessions after successfully completing the business entrepreneurship curriculum and creating a business idea.

Mentees were paired with vetted mentors who mentored them throughout the phases of mentorship through the online Appa and Girls digital incubator- Codegalaxy or offline in schools, or at the Apps and Girls hub for he out of school young women.

Some of the student business ideas from various schools/coding clubs which were onboarded for mentorship

REGION	SCHOOL	NAME	BUSINESS IDEA
Dar es Salaam	Kisutu S.S	Zainabu Iddi Selemani	Problem: Poor academic performance of students especially girls in primary and secondary schools Solution: creating a system that will provide subject notes, allow individual practice and do competitions among students so as to improve their performance academically.
Dar es Salaam	Jangwani S.S	Ester Lucas	Problem: Many girls who become pregnant at a young age have difficulty finding maternity supplies and accessories for their babies such as clothes and shoes after giving birth. Solution: Creating a system that first provide an education to mothers and sell the maternity supplies and accessories as well as baby clothes and shoes
Tanga	Kiimoni S.S	Asma Hassan Mbagi	Problem: Because most primary and secondary school teachers in public schools teach more than one subject, hence they end up multiple sessions during the day. They sometimes forget about their class times and do not arrive on time for their scheduled class hours. Solution: Developing a system that will be deployed in each classroom and office to alert teachers and students when the time for each lesson approaches by identifying the subject and teacher.
Dodoma	Kisasa ss	Agness Rasmond Mtimatuki	Problem: The presence of unreliable middlemen to unite farmers and traders. Solution: Create a platform where traders and farmers can safely interact and conduct business



MENTORSHIP AND INCUBATION

▶ INCUBATION

The incubation program aims to foster the development and success of student start-ups and early-stage businesses. Students who come up with products, implementation plans/action plans, business plans, and Business Model Canvas are given a variety of support, including financial assistance like sourcing funding through grants and proposals, legal assistance like registering their businesses, as well as other individual support they may need for the implementation of their startups.

28 startups are actively within the incubation program working towards developing their projects into working startups that implement change within their respective communities.

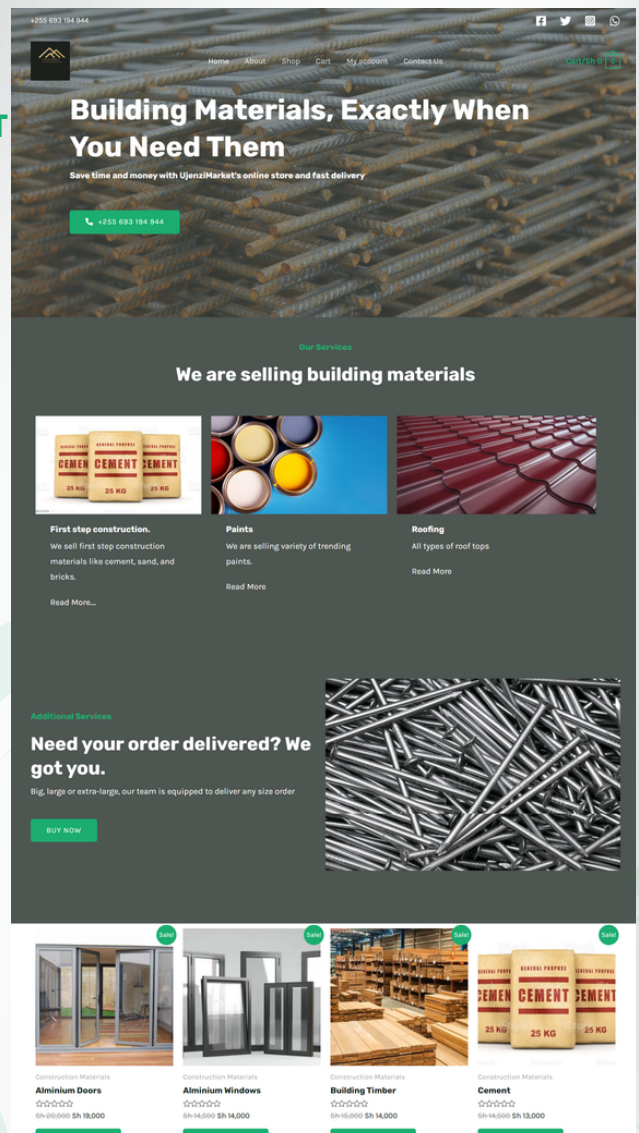
THE FOLLOWING ARE SOME OF THE STARTUPS CREATED IN 2022:



Name: Grace Raymond
Project Name: UJENZIMARKET

Problem: Science and technology have promoted the economic status of Tanzania which has directly and indirectly improved the standard of life of many citizens which can be seen through their lifestyles, and careers the rise in the standard of living of people has encouraged an increase in the construction of houses and other buildings, Despite numerous builders in Dar es Salaam, particularly in remote places there is a lack of access to building supplies due to the far distance between construction supply stores, which results in a lack of prompt services.

Project description: Ujenzi Market is an online (website) <https://ujenzimarket.niwezeshe.com/> and offline market that deals with the sale and purchase of construction materials at wholesale and retail prices in cooperation with sellers of construction materials, constructors, and landlords to support the acquisition of long-distance stores by the service of delivering, to the remote areas found in Dar es salaam.



MENTORSHIP AND INCUBATION

THE FOLLOWING ARE SOME OF THE STARTUPS CREATED IN 2022:



Name: Christina Lutambi
Project Name: ChriHealth

Problem: In Tanzania, young people (those under 24) make up 32% of the population. These young people struggle with a variety of serious issues related to sexual and reproductive health, including a lack of access to services geared toward their needs and a lack of information on topics like development, sexuality, and family planning. Due to this, young people in Tanzania are more likely to engage in risky sexual behaviors that increase their risk of contracting STIs, HIV, and other diseases. They are also more likely to become pregnant early and be more vulnerable to complications during delivery, which increases the likelihood of death and disability.

Solution: Chrihealth is a platform for online doctor consultations, <https://chrihealth.co.tz/> Chrihealth offers improved services for sexual and reproductive health care via chat, phone, and video calls. On this website, ChriHealth assists youngsters in obtaining SRH guidance from the top doctors in the nation. In addition, we offer other services including home delivery of prescription drugs and sexually explicit items and second opinions from doctors. Our goal is to develop a much-needed, open, and affordable SRH care infrastructure.

The screenshot displays the ChriHealth website. At the top, there is a navigation bar with links for Home, About Us, Online Pharmacy, Contact Us, and a 'Talk To Doctor' button. The main content area features a large banner with an illustration of a doctor and a patient, with the text 'Chrihealth' and 'Online Doctor Consultation on STDs and Related Sexual Health Issues'. Below this is a 'Book Appointment' button. A secondary section titled 'Get the best care from anywhere!' includes a brief mission statement and a 'Meet Our Doctors' button. The 'Buy Medicine' section lists three products: 'Cathy Pads' (Sh 4,500), 'Lavy Pads' (Sh 3,500), and 'Dume Condoms' (Sh 2,000), each with an 'Add to cart' button.

MENTORSHIP AND INCUBATION

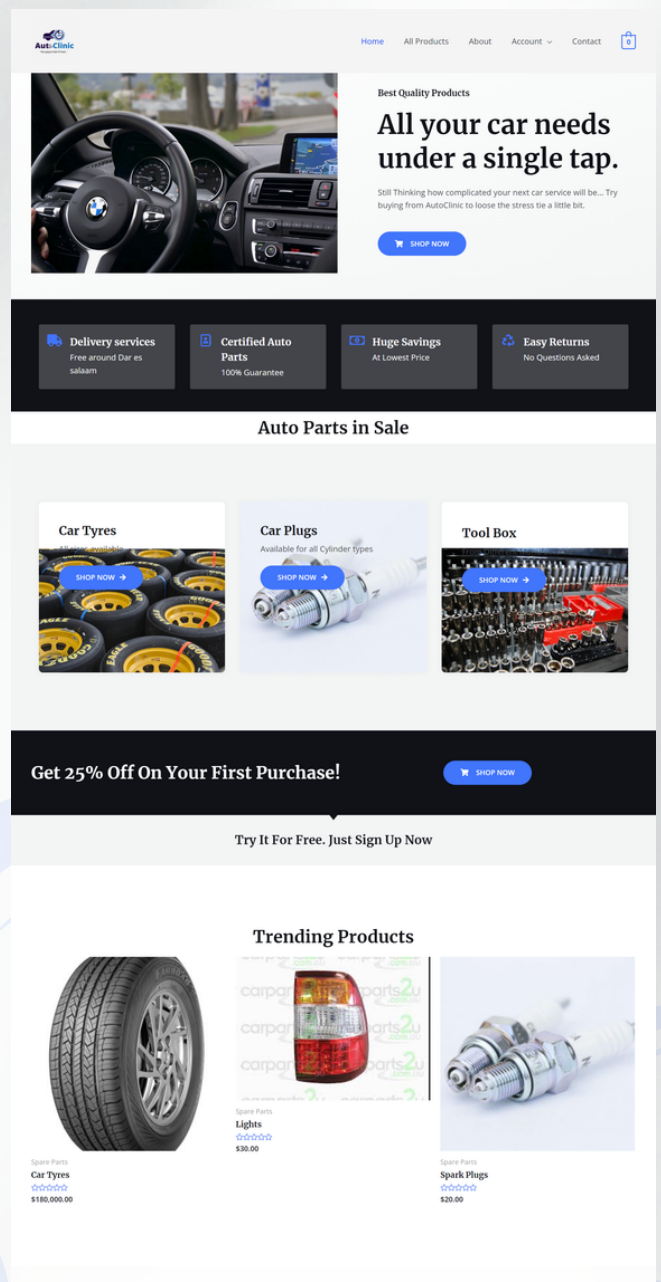
THE FOLLOWING ARE SOME OF THE STARTUPS CREATED IN 2022:



Name: Neema Derick
Project Name : AutoClinic

Problem: As a developing country Tanzania is still improving and extending infrastructures which has in turn encouraged the use of motor vehicles and increase in transportation business services but the Lack of dependable and prompt emergency car maintenance services for drivers, when they encounter mechanical issues in urgent situations which is mostly brought on by poor communication between drivers and auto technicians and drivers' ignorance of how to perform maintenance on their vehicles, causes traffic accidents, theft, and time wastage. According to WHO road accidents rank tenth as the leading cause of death in Tanzania.

Project description: AutoClinic is a website and mobile-based application <https://autoclinic.niwezeshe.com/> that enables users to book vehicle maintenance services whenever and wherever they need them, as well as to buy car additives and spare parts online. It also serves as a reminder for users to take care of their vehicles so they can reduce the risks of encountering hazards on the road that may otherwise be fatal.



MENTORSHIP AND INCUBATION

THE FOLLOWING ARE SOME OF THE STARTUPS CREATED IN 2022:



Name: Nuru B Mwangaliamo
Project Name : Jomo Kisomo

Problem: In Tanzania, a higher proportion of women can be seen among those with little to no formal education—approximately 31% of the population. Despite the introduction of the free education policy for primary and lower secondary levels, a low level of literacy is still a major issue as most people barely complete their secondary level education. The majority of secondary school students, particularly in government schools, perform poorly because they lack experience in how to respond to questions on national examinations and this is partly because government schools receive inadequate financial assistance, which lowers the quality of education provided to the students.

Solution: Jomokisomo is a software program that may be used both online (website and mobile application) <https://jomokisomo.niwezeshe.com/> and offline (USSD) that provides students with a variety of questions and explanations about how to respond to them on national exams, especially those who were studying for the most recent national exams(candidates). Jomokisomo seeks to encourage students to pursue higher education and enhance their quality of life while assisting in lowering the percentage of high school dropouts and improving the quality of education public school students are able to access.

Home About Academics Activities Contact

JOMOKISOMO

This is where we help students learn they need to transform themselves, others, and our global communities.

Our Academics

Learning Begins With Us

We, at Jomokisomo School offer supportive and inspirational environments for young examine minds to learn and grow with us. Our passion for learning means we achieve more than outstanding results. We strive to build confident and creative thinkers and aim at delivering an education that is truly relevant to their future.

“

We aim at inspiring our students to dream more, learn more, do more, and become more in their respective journeys of life.

NURU BONIPHACE-Founder

Online Tuition

The Jomokisomo aims at offering all our students special candidate classes form two and form four a broad and balanced curriculum that provides rewarding and stimulating activities to prepare them for the best performance in their next examination.

MENTORSHIP AND INCUBATION

THE FOLLOWING ARE SOME OF THE STARTUPS CREATED IN 2022:



Name: Amina Baruti

Project Name: DentPlus Labs

Problem: The Tanzanian government made sure that all children who are of school age are enrolled in school by constructing schools and labs in practically every ward around the nation. Despite government efforts, student performance in scientific classes remains subpar. This is caused by a variety of circumstances, such as ; the fact that some students struggle to learn on their own owing to dyslexia (a common learning difficulty that mainly causes problems with reading, writing and spelling), a shortage of experimental tools and qualified laboratory technicians to help them in the labs, and a lack of interest on the part of the students in their science studies.

Solution:

<https://dentpluslabs.niwezeshe.com/> is a portal that provides curriculum-based notes and streamlined learning videos for science disciplines. This platform aims to raise the level of awareness among secondary students in Form 1 to form 6. In order to make learning science more understandable, Dentplus Labs offers interactive learning materials that incorporate augmented reality (AR) technology. This will enable kids to comprehend through seeing and hearing, as opposed to only reading from books. Additionally, mobile labs will be introduced, allowing students to congregate, learn, and practice various experiments for a deeper knowledge of how they might use science realistically.

The screenshot displays the DentPlus Labs website. At the top, there is a navigation bar with links for Home, All Courses, Learning Videos, and Contact, along with social media icons. The main header features a large image of a smiling student in a lab coat, with the text "We make learning science fun and interactive." Below this, a "Start Learning" button is visible. The "About Us" section follows, containing a paragraph about the organization's mission. A "DentPlus Labs at a Glance" section uses icons to show 2K+ Students Impacted, 90+ Qualified Teachers, 80+ Schools Reached, and 100+ Topics Covered. A quote from Amina S. Baruti, Founder, states: "We aim at inspiring students to learn science willingly since the future relies on science and technology to attain development." At the bottom, two blue boxes define the "Mission" and "Vision": "To make learning science friendly and understandable by all students."

MENTORSHIP AND INCUBATION

CHALLENGES IN CONDUCTING MENTORSHIP SESSIONS

Unlike our other programs, which are modeled after school curricula and teaching methods, the mentorship program focuses on students' ability to learn new skills and accurately apply them in the creation and development of their own individual startups. As a result, the program requires student commitment, punctuality, and comprehension in order to achieve the desired results. Despite the outstanding outreach to students across Tanzania, many students who had potential business ideas were unable to enroll in the mentorship program due to unavoidable challenges that occurred during the program's implementation. These challenges included:

1

Distance from the hub: In order to accommodate students who were passionate about learning coding and entrepreneurship in schools without equipment and extra curricular activities slot in their school timetable, students who were able to come to our hub and keep learning like their peers in other schools, unfortunately most of these students live very far from the hub and this contributed to inconsistent attendance that greatly affected their progress in the mentorship sessions.

2

Inconsistencies with school time tables: Apart from the challenge of not having specific time slots for extracurricular activities in some schools, schools with the timeslots were often interfered with other school activities such as sports, exams, and tests, PTC and other subject teachers used the slots to help cover more of the syllabus, This challenge greatly affected the progress of students in coding clubs since mentors would only get a few minutes or none at all from the one hour allocated to conduct club activities.

3

Inadequate computers in Schools: Schools outside Dar es salaam we relied on online mentorship for students to create their ideas, but the sessions would face challenges such as poor connectivity and lack of proper computers to access the online sessions as a result most of the sessions were done via teacher's phones and in other regions it was challenging to host a session all together

4

Exams and weekend tests: Many schools have incorporated the use of Saturdays to motivate students to study by hosting weekly exams and tests as well as extra class hours for complex subjects such as math and physics. As a result, the number of students able to attend Saturday sessions at the hub has been decreasing over the year and has greatly hindered the progress of students, resulting in some students spending months in one phase as they are only able to attend a minimal of one session per month.

5

Family chores and responsibilities: Most of the schools in coding clubs are mixed, as a result, we have both girls and boys attending sessions, but unfortunately, due to family chores and responsibilities, the attendance of girls is very inconsistent, hindering their progress in the development of their startups since they are expected to help their mothers with looking after the house and their younger siblings.

MENTORSHIP AND INCUBATION

TESTIMONIES FROM MENTORS



I was very delighted to become a mentor for Apps and Girls this year, I got to work with young and innovative students. I have always been very passionate about leadership since my school years and I am more than delighted to have a chance to help motivate other young girls to gain more confidence and become real life leaders by creating ideas that actually solve problems they have faced/ or experiencing within their communities. I am looking forward to being able to positively impact more young girls in finding their passion and creating positive change around their communities.

Doreen Mongi



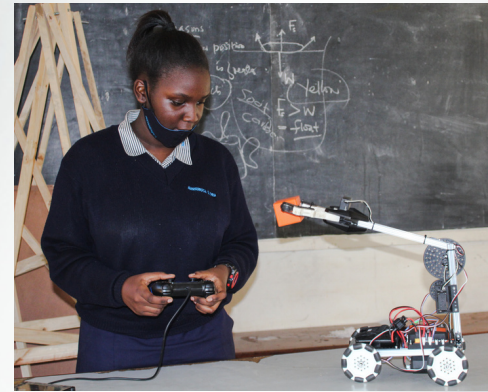
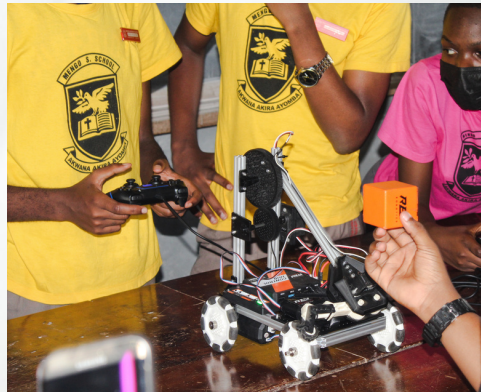
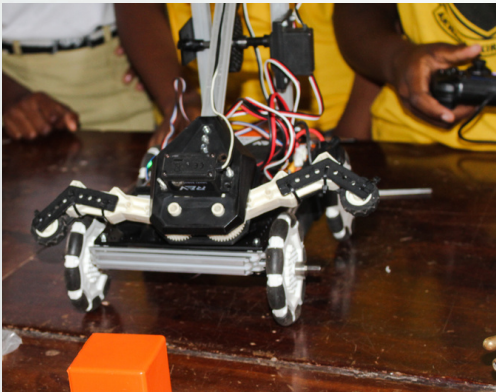
I am very passionate about entrepreneurship and technology, and I am thrilled to be able to share my enthusiasm and inspire young students to learn about and pursue technology in the future. Apps and Girls has given me the opportunity to assist students in making a real-life impact through the use of technology and entrepreneurship. I strongly encourage guardians and parents to enroll their children in Apps and Girls programs so that they can fully benefit from impactful extracurricular activities.

Ramadhan Mrisha

APPS AND GIRLS BEYOND BORDERS

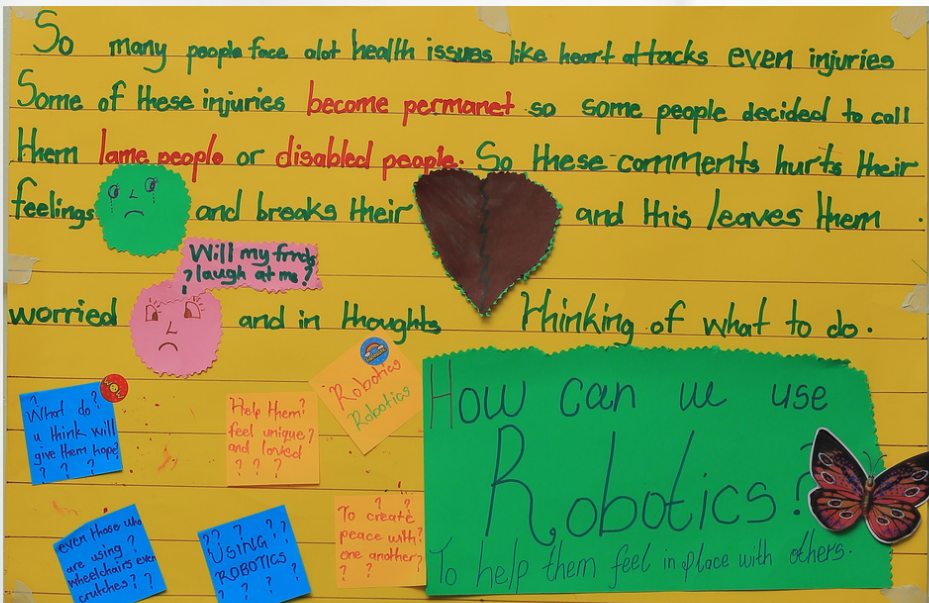
In 2019, we scaled our programs in Uganda under the STEM BUDDIES Program, which is focused on mainly robotics training, coding training, and tech entrepreneurship support and training for girls and boys aged 12–24, either enrolled in school or currently out of school.

In 2022, we partnered with Mengo Secondary School where we created our first coding club in Uganda. Prior to students and recruitment, we conducted motivation and awareness robotics demonstrations in two schools, GreenHill Academy and Mengo s.s for 200 students. Thereafter, 56 students enrolled in the coding club under the **STEM Buddies program** and spent one whole term learning Digital literacy and website designing.



In Apps and Girls' partnership with FIRST Global extends to Uganda, this year we prepared and mentored a team of 8 students who built and programmed a robot to participate in the 2022 FIRST Global Challenge in Geneva, Switzerland; however, due to visa denials, the team was unable to travel to Geneva and was forced to participate remotely instead

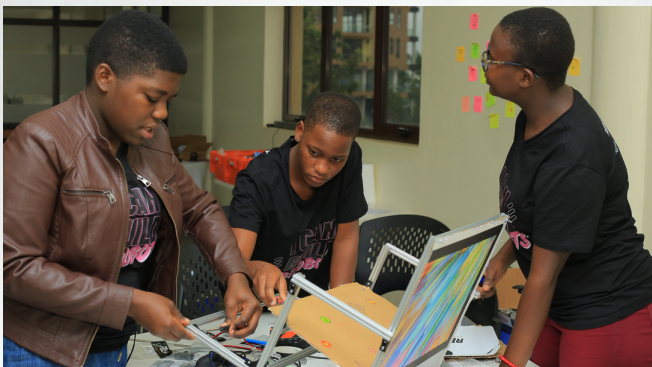




Group 2:

Since most of the equipment available for disabled or injured young people is not comfortable and appealing to use, for example, the wheelchairs available are manual with causes muscle pain, strains, and fatigue and also are not hygienic they are, Group3 created a robotic wheelchair that can be controlled by a game-pad, no pushing or pulling required, just a press of buttons and it's already moving thus providing comfortability to the user and preventing further injuries and infections.

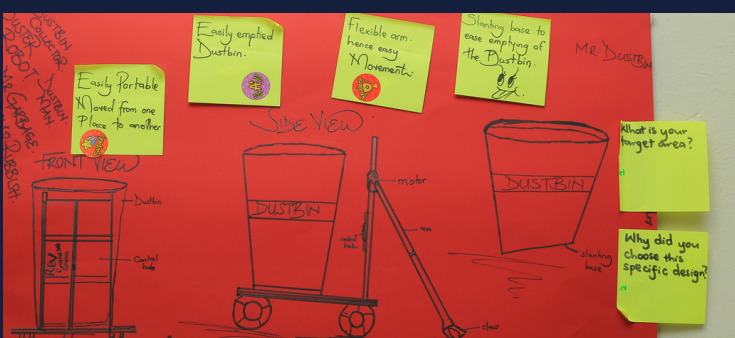
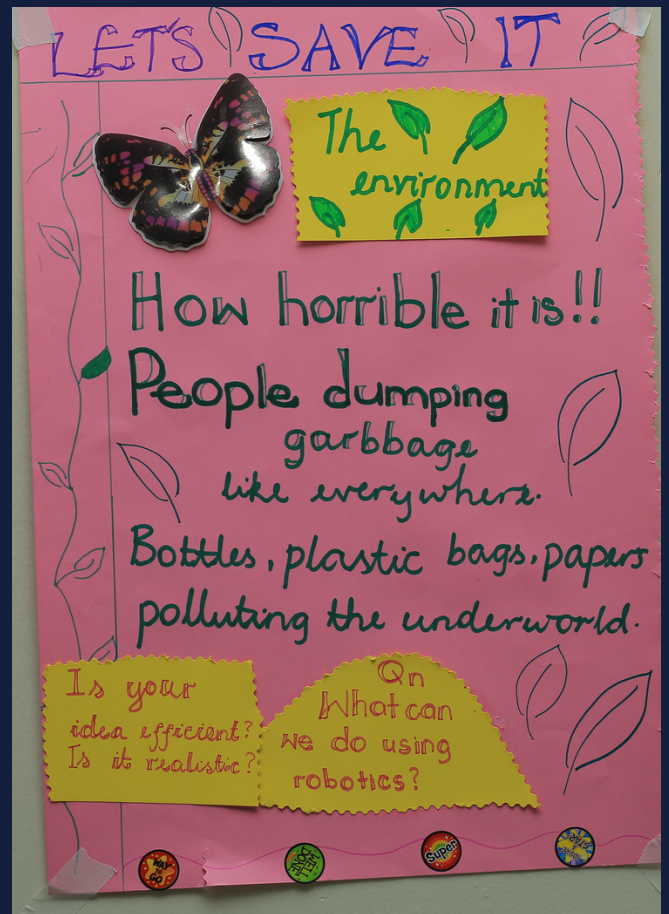
The team also intends to make it stylish and colorful and include an entertainment element for playing music!



Group 3:

Working on a garbage collecting robot that could be used to collect garbage in schools and hospitals thus keeping the environment clean avoid the spread of diseases that affect human health.

However, the robot could also be used in the stone quarry mines, where it can be used to lift heavy stones/rocks and throw them into the crusher.





Group 4:

Many Girls in rural areas experience difficulties during their monthly menstruation period because most of their parents can't afford to buy sanitary pads which are usually sold per packet.

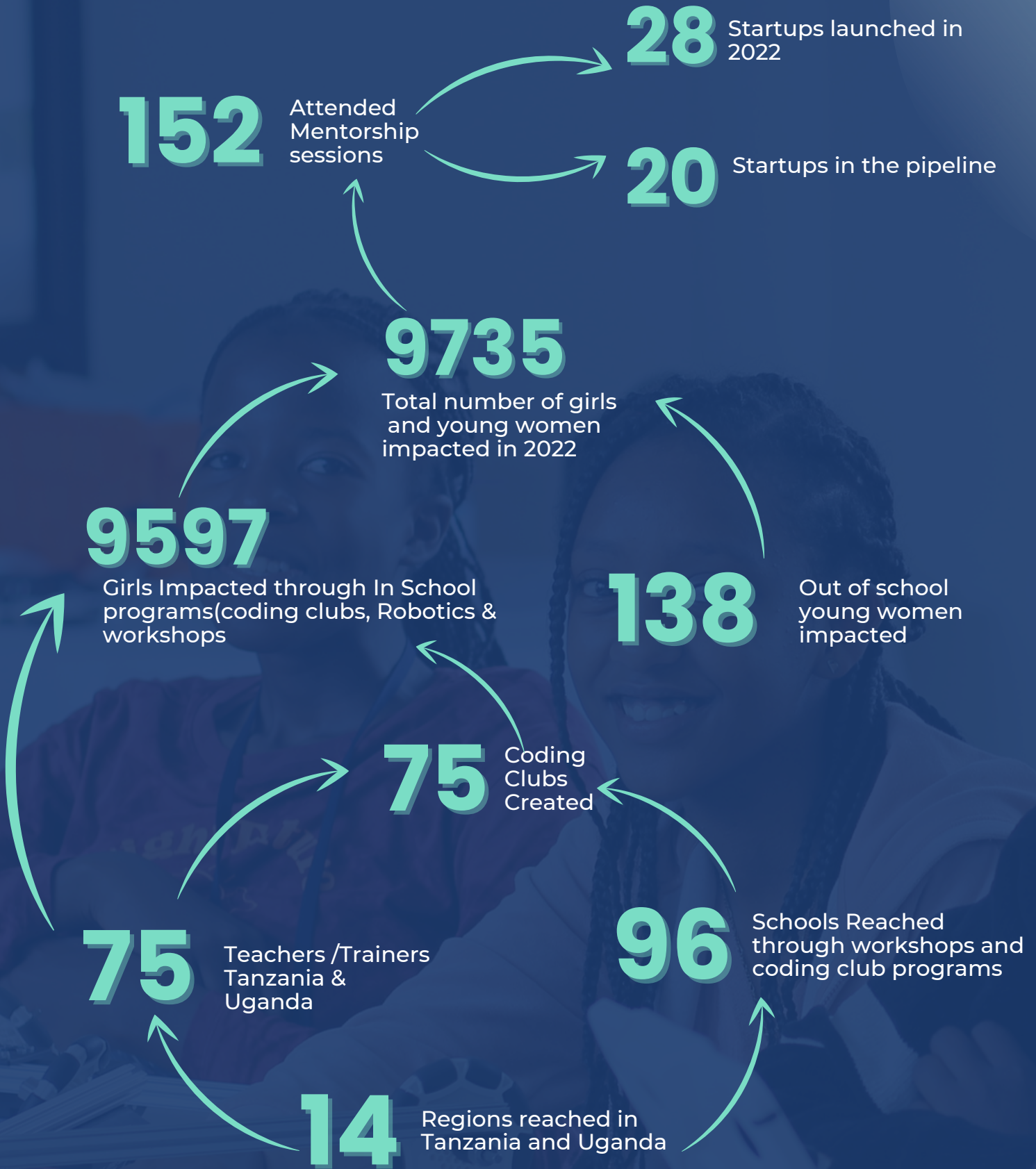
Therefore, they end up missing out on school during their menstruation period and use unhealthy materials such as old clothes, toilet paper, and others which cause a lot of UN-comfortability, infections, and future health risks to their lives. Because of this, many of them perform poorly and end up in poverty and risky situations throughout their lives.

The group created sanitary pads vending robot prototype that would be stationed in rural schools for girls access sanitary pads at an affordable price and with a conducive mode of payment. The girl in need of a pad will be able to buy a piece of one or two pads by inserting a coin in the robot and it will dispense the pads.

However, the team plans to also install the robot in wealthy schools for girls to get access to pads conveniently but at a higher price so as to raise money to support our sisters in rural areas.



IMPACT IN NUMBERS



IMPACT STORY



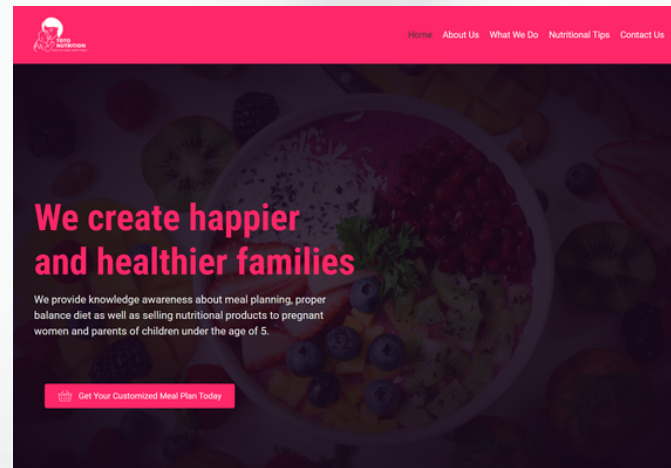
Name: Amina Said Jumanne
Project Name: TotoNutrition

Amina Jumanne Said was always driven to succeed in and serve the community in which she lives. She is the last born in a family of five children, she likes cooking, swimming, modeling, and graphic designing. She completed her primary education at Gangilonga School in the Iringa region, and she joined the private school of the Kanyiko Development Association (KADEA) and managed to complete her secondary education. Amina originally enrolled in our organization's tech-entrepreneurship training program for form four and form six secondary graduates in January 2022, she was a procurement and supply management certificate graduate at the time, but owing to financial constraints she was unable to continue her education. As a result, she spent two years at home doing nothing.

Through the program, Amina was able to learn the basics of web development, graphics, and design thinking and build upon her skills through hands-on projects and mentorship from our trainers and mentors. With a passion for coding and a desire to learn more about the whole concept of entrepreneurship engaged with technology and take on new challenges, She started her own initiative called TotoNutrition (<https://totonutrition.co.tz/>). TotoNutrition is an online and offline platform that provides meal planning services to pregnant women and children aged 0-5 years old. TotoNutrition's vision is to influence families and children to make healthy food choices for the rest of their lives!

Amina's hard work and dedication paid off when she was offered a scholarship to attend a college for Information Technology at NLAB Innovation Academy for a certificate level in Information and Technology (IT) where she is learning a wide range of technical and technological skills and continuing her formal education. She is now thriving in her studies and is well on her way to a successful career in the tech industry.

We are so proud of Amina and all that she has accomplished. Her journey is a testament to the transformative power of education and the impact that our organization is making in the lives of young people.



What We Offer for Good Health?

Customized Meal Plans

The specific nutritional choices you and your children make are crucial. Good nutrition is essential to good health and here at Toto Nutrition we encourage parents to think of their nutritional decisions as health decisions.

Selling Nutritional Products

For pregnant women, mothers and children under the age of 5.

Why TotoNutrition Makes Sense

Tanzania has the highest rate of under weight children who are born less than 2.5kg in East Africa with 1.27million under the age of five suffering from this condition and over, 90% of pregnancy women attend prenatal care check up at least once, and 51% attend more 4 times while 24% attend the first prenatal care before the fourth month of pregnancy.

"From Apps and Girls, I came to understand a lot about myself and mostly developed my passion for technology." ~ Amina claims.

EVENTS

FORUM FOR INTERNET FREEDOM IN AFRICA 2022

Our founder and CEO, Carolyne Ekyarisiima was invited to speak on **Resistance and Connection: an African Feminist Perspective for Decolonizing the Internet Panel** at the Forum for Internet Freedom in Africa 2022, in Lusaka, Zambia. Together with her fellow Panelist, the panelists shared their efforts of feminists in reimagining a feminist internet within the context of their work and shared realities of African women's lives in a space that as not created for them or by them- the internet.

DECOLONIZING THE INTERNET 2022 (DTI2022)

Carolyne Ekyarisiima also participated in DTI2022 organised by **FEMNET** and **Whose Knowledge**. DTI brought together 40 feminists, activists, technologists, artists, scholars, knowledge professionals and digital curators from across the East-African region in Lusaka, Zambia and had authentic and deeply thoughtful conversations and reflections on decolonizing the internet, leveraging critical feminist scholarship, human rights activism, and knowledge of internet technologies, community organizing, and partnerships



I IMAGINE A SPACE THAT IS SAFE BOTH ONLINE AND OFFLINE FOR WOMEN TO PARTICIPATE IN CREATING SOLUTIONS AND PRODUCTS THAT MEET THEIR NEEDS AND REALITIES, AND TAKES THEIR CHALLENGES INTO CONSIDERATION.

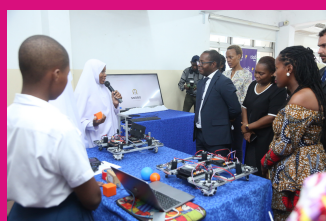
– CAROLYNE EKYARISIMA

By Tinazal, CC BY-SA 4.0, via [Wikimedia Commons](#)



GIRLS IN ICT DAY 2022

On the occasion of the International Girls in ICT Day 2022, Tanzania's leading digital lifestyle company, Tigo, joined Apps and Girls, a nonprofit organization based in Tanzania dedicated to bridging the technology gender gap in Tanzania and across Sub-Saharan Africa, to launch phase III of the girls and young women project.



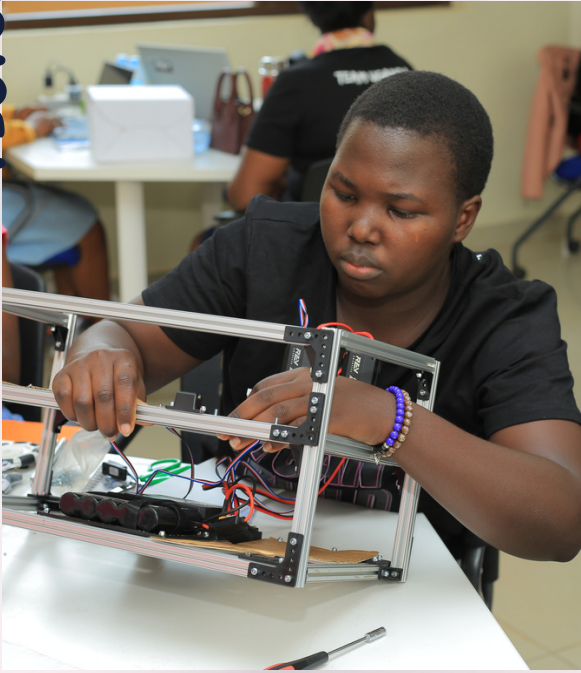
EVENTS

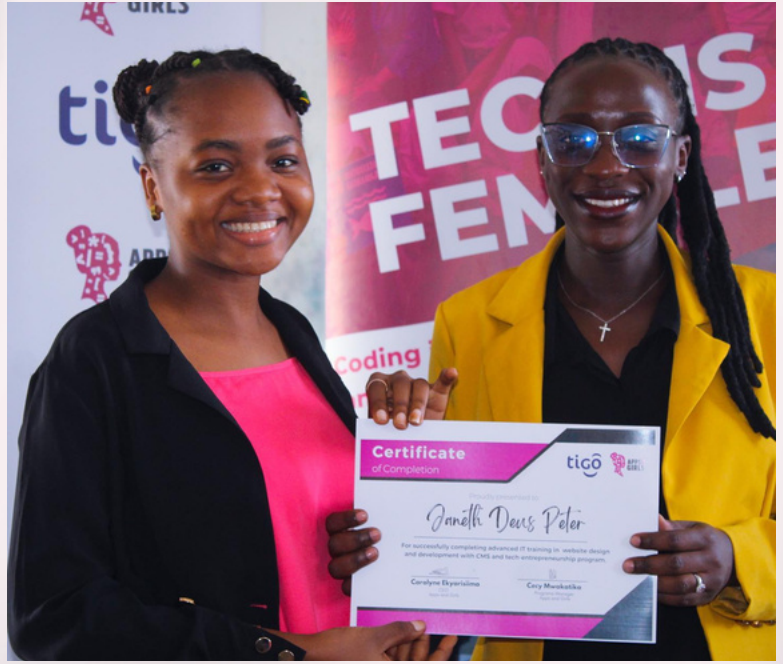
FIRST GLOBAL CHALLENGE 2022

In our robotics program, a group of 11 students was retained to train for and compete in the FIRST Global Challenge. Five of these students were chosen to represent Tanzania in the global robotics competition in Geneva, Switzerland, where they took second place as the winning alliance and were awarded silver medals.



2022 IN PICTURES





CHALLENGES

▶ **NEED FOR ADDITIONAL EXPERTS**

Most of our mentees and alumni have already launched on their tech projects, and some do not have professional mentors to help them in different fields such as branding and marketing, legal issues, finance, and mobile technology like USSD Technology. There is a need for additional experts to assist our emerging tech entrepreneurs and help them scale their businesses,

▶ **NEED FOR ADDITIONAL MENTORS**

Our usual mentor-to-mentee ratio is 1:5, but right now, the number of mentees in each school has drastically surged and exceeded expectations. Owing to the students taking part in our programs' ambition and zeal to build startups and solve societal issues.

▶ **PROGRAM HIGH DEMAND**

There is a high demand for our program's services/interventions, and due to the limited resources available, we are afraid that we will not be able to accommodate everyone who is passionate and interested in participating.

This demand is also evident among school boys in the mixed schools where we operate; we have been forced to change our target audience and include boys in some schools because digital illiteracy and the digital divide exist for both, particularly in rural areas.

▶ **SCHOOL DISTANCE AND LOCATION.**

Some schools were located far from town and each other, and transportation to them was difficult, resulting in a change in the time scheduled to begin and end workshop sessions, equipment damage, and unexpectedly high expenses.

▶ **THE NEED TO SECURE SUPPLEMENT PERMITS**

TAMISEMI has granted Apps and Girls an official permit that allows us to access all schools in the country, but schools still require official communication or documents from the district director in order to give us access to their students.

This process takes a long time and involves a lot of bureaucracy until it is issued.

▶ **SUDDEN CHANGES IN THE SCHOOL TIME TABLE.**

We were unable to conduct workshops in some schools as planned due to unanticipated changes in the school schedule, causing delays in project deliverables and targets, as well as unexpected additional costs.

RECOMENDATIONS

- ▶ Narrow the scope of our operations and deliver high-quality services that are efficient in light of the resources at our disposal.
- ▶ Invest in obtaining official letters from all regional and district directors to ensure that the project is implemented smoothly in schools.
- ▶ Establish more partnerships with other organizations and stakeholders in respective regions to supplement available resources and program replication in different areas to meet current or future high demand.
- ▶ Recruit more mentors to support the mentorship program because the number of mentees is growing as the project is implemented.



LESSON LEARNT

1

Despite the excessive demand for our services in Tanzania and throughout East Africa, it is crucial to work with small groups at a time in order to achieve greater outcomes and social impact. This will enable adequate availability of necessary resources required to support our beneficiaries and ensure a straightforward tracking of the social impact achieved.

In consideration of this, we intend to concentrate on a select few schools and work with smaller cohorts of young women who are not currently enrolled in school.

2

In order to accurately and effectively implement, achieve great results, and eliminate disparities, women empowerment, particularly in the technology, entrepreneurship, and innovation for girls and young women; significantly requires all team players' efforts and synergies, such as the government, corporate companies, CSOs, and the community (parents, teachers, etc.).

3

Young girls are a great and vital resource for the development of our continent and have many bright ideas that have not yet been tapped into. More support is required to help the young girls' voices be heard, recognized, and given a seat at the table where they may participate in decision-making and contribute to the STEM-driven 4th IR.



We are grateful and thankful to our

SPONSORS



AND

PARTNERS AND SUPPORTERS



Important Links:

Our Website:

www.appsandgirls.com
www.ug.appsandgirls.com

Code Galaxy:

www.codegalxy.co.tz

Girls Entrepreneurship Summit:

www.girlsummit.africa

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