SHE CODES FOR PEACE – GIRL EMPOWERMENT THROUGH CODING

Luanda, Angola 13th June – 22nd July 2022

The College of Idaho

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BACKGROUND

Women have long been relegated to the margins of history making. This has meant that women and girls have been denied the opportunity to engage in various spheres of life that impact them as well as opportunities such as education to reach their full potential. Having been privileged to attain education abroad and in disciplines that are known to be dominated by men, we would like to give back to our communities by enabling young girls to take up space in these fields such as the tech industry. Growing up in Angola and Zambia respectively, we observed that very few women took the science route and specifically computer science and engineering. According to the United Nations Development Program (UNDP), studies highlight that globally, women constitute 28% of professionals in the tech industry, and just 30% in Sub-Saharan Africa. The data is indicative of the lack of representation of women in science and technology which can pose social and political challenges within the discipline but also through its applications in daily life. The representation of women in the tech industry is imperative not only to enable young girls to aspire to such positions but also for the diversity and inclusivity of differing perspectives. As technology is incessantly evolving in contemporary times and affecting issues such as social justice and entrepreneurship, we believe that the gender gap in tech needs to close in and women should equally have the chance to develop tech that revolutionizes the tech landscape in Africa. This also allows for women to take an active role in creatively solving some of the biggest challenges that Africa faces in health and education to mention a few through technology while contributing to closing the tech gap between Africa and the rest of the world. Ultimately, we believe that women should be afforded space within the tech industry because their ideas are equally valuable, and representation is pivotal in leveling the plane field for other women to take up space. We hope the project inspires more girls to delve into science and technology and use the skills they acquire to make a difference for themselves and other women, on the continent and the world at large.

OBJECTIVES

The objective of the project is to first and foremost promote education for girls. Additionally, the project aims at encouraging more girls to pursue careers in science and technology to increase the representation of women in the field. The project is also meant to promote gender equity within the realm of education, particularly science and technology. In addition, the project recognizes the intersections of race and gender within the tech industry and aims at creating more spaces for Black and African women within the industry. Furthermore, the project will equip young girls with the skills to effectively harness technology to come up with solutions to context specific problems that are affecting their communities and the world at large. The project will also inspire a new generation of African women who critically think of ways to come up with solutions to challenges around them through the innovative power of science and technology. Lastly, the project aims at creating a network of women that support and build each other on their trajectories to becoming women in STEM.

PROJECT DESCRIPTION and METHODOLOGY

The project will consist of a 6 week-long learning and networking program targeting pre-teen girls up to tenth graders (around the age of 18) taking place at a library with access to a computer lab. In addition, the aim of the project is to get the girls to learn some basic knowledge of computer science and programming languages. Furthermore, the project will be centered on creating mentor-mentee relationships with female university students that can potentially be lifelong and support the young girls on their paths to becoming women in STEM. We will have support from a group of 15 female students in the STEM field from 4 universities (Instituto Superior Politécnico de Tecnologias e Ciências, Instituto Superior Técnico Militar, Universidade Metodista de Angola and Universidade Privada de Angola), 3 of whom will

assist with organization and preparations, as well as 3 female tech professionals through the Angolan UWC alumni network. The project is targeting to cater to around 30 girls, 15 in the mornings and 15 in the afternoons. The young girls are from 3 institutions in Luanda, Angola, which we have contacted and agreed to be part of this pilot program, 2 public schools (Complexo Escolar São Domingos and Escola Rei Mandume) and a girls-only foster house (Associação de Apoio a Criança Abandonada).

Classes: The classes will consist of 3 modules; each week will have at least one element of each module. Module I: Learning – consisting of learning a new programming language, developing knowledge of it and learning new skills, Module II: Applying – consisting of doing creative and integrative exercises, Module III: Visualizing – consisting of seeing and acknowledging their own work and progress and how those skills are implemented in the world around them. We will use free coding resources that are user friendly, designed by women for girls (imagiLab).

FF – Fun Fridays: this will serve as motivation and reflection days as well as for fun. The girls will start each Friday with a talk and discussion with an Angolan woman in Tech with the intent to motivate them. They will have mentor-mentee time to connect with mentors, reflect on the week, talk about challenges and conflicts girls and women face, establish goals for the following week and it will serve as a safe environment for them to share their aspirations for the project and beyond.

Mentoring Program: each girl will be paired with a female mentor. The mentors will be volunteer academic/university students of computer science or related field, or volunteer professionals in tech. These mentors will function as a source of inspiration, guidance, and support through the 6 weeks and possibly after the summer project is completed. The hope is that through the mentorship program, the young girls can continue their paths to STEM long after the project is completed.

TIMELINE

Before Project: prior to the end of the academic year, we will make most of the logistics of the project such as bookings, Friday speakers' timetable, making a full schedule for the 6-weeks of the project, with help and guidance from Education and Computer Science professors from the College of Idaho in preparing the content for each teaching session. As well as having online meetings with mentors and speakers.

May 30th to June 10th: Finalizing room arrangements, access to computer lab and media library and other needed material. Meeting with mentors and speakers, downloading necessary software, etc.

June 13th to July 22nd: Project running period – Example of a week of the project

Time	Time	Monday	Tuesday	Wednesday	Thursday	Friday
09:00	13:30	Introductions	Basics of Python	Creative Python	Weekly review	Talk/presentation
09:30	14:00	Ice breakers	Basics of Python	Creative Python	Weekly review	Talk/presentation
10:30	15:00	Intro to Python	Basics of Python	Creative Python	Q&A	Talk Q&A
				Break		
11:00	15:30	Mentorship Intro	Learning exercise	Learning exercise	Q&A	Mentor-Mentee
12:00	16:30	Mentor-Mentee				
12:30	17:00	Mentor-Mentee	Learning exercise	Learning exercise	Exercises	Fun and games

OUTCOMES AND SUSTAINABILITY: Starting a mentorship network for girls and women in tech, girls will have 12-month access card to computer lab and media library and can continue to develop their computing skills as well as be exposed to information and resources helping them to follow a path in STEM. Contribute to closing gender inequality gap. Build a long-term network of women in STEM to support the girls and their future endeavors in the field. To essentially establish a Black girl codes chapter to expose more girls to the tech industry.

COVID-19: This project will abide by the health guidelines set by the Angolan Ministry of Health, i.e., social distancing, mask wearing etc.

PROJECT BUDGET

TRANSPORTATION/LODGING/ FOOD

TRAVEL	Airfare	$3775
	To/From airport	$27
	In site public transport fare (for the 2 project leaders)	$120
HOUSING	Hostel/Homestay	$1500
	Utilities	$281
FOOD	During travel	$30
	During project	$910
VISA		$70
COMMUNICATION	Mobile data	$100
HEALTH INSURANCE		$122.9
ACCESS TO COMPUTER LAB		$11
MISCELLANEOUS / EMERGENCY		$370
SUB-TOTAL		**$7316.9**

COSTS RELATED TO THE PROJECT

TRANSPORTATION	Public transport fare (for the 3 assistant organizers)	$180
	Bus rental	$168.7
DIRECT EQUIPMENT AND SUPPLY	Python - 5 imagiCharm (1 for each 3 girls per session)	$861
	Stationary & Office Supply	$181.4
	Food	$520
	Room Rental	$590.5
	Computer Lab access for 35 people	$181.5
SUB-TOTAL		**$2683.1**
TOTAL		**$10,000**