



## **DigiEduHack Solution Colombo - Future of Education in Sri Lanka- Global Perspective Challenge: Colombo - Future of Education in Sri Lanka- Global Perspective Challenge 2021**

### **Devol robotics club**



#### **A robotics club targeted towards local students**

Devol is a robotics club made independent from schools, giving a wider reach than setting up clubs in each school. It will be targeted towards students between ages from 16-20, mainly focussing on O/level and A/level batches.

Devol will be initiated in Colombo and expanded to other areas later.

#### **Team: DEVOL**

##### **Members roles and background**

Shamaya Goonewardena presented our solution on the day of the competition. She also dedicated the most effort into making the presentation, her creativity helped the team develop the idea of the club.

Devangi Wijebahu Wikramaratne possesses a great talent for analytical thinking. She helped to ensure that our presentation addressed all of the questions that were mentioned in the judging criteria. Her quick thinking also helped us to answer all the questions asked by the judges to the point and quickly.

Michaela Jayasuriya helped with all the small details of this project. Her sharp thinking identified the smallest issues and helped us ensure that all the points were covered and made sure that we were well researched on all topics related to the club.

Nisyah Peiris was the most creative member of the team. Coming up with the name for our club as well as the idea to have an active social media presence which really made our club stand out.

Each and every single member of our team is invaluable and each played an important role in

making this project a success.

## **Contact details**

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# **Solution Details**

## **Solution description**

George Devol, also known as the grandfather of robotics, is credited for creating the first industrial robot, Ultimate. This robot was able to do tasks which put workers at a risk of inhaling toxic fumes or even risk of losing limbs. Therefore, Ultimate, which worked on a General Motors assembly line made the working place a much safer place for all employees.

The name for our robotics club, Devol, was inspired by the grandfather of robotics himself. We hope that our club would not only increase the knowledge of Sri Lankan youth but it would also give them the skills to work in collaboration with technology in the future.

This club would carry out several activities such as weekly sessions with qualified teachers, outreach programs to promote robotics in rural areas and most importantly, summer camps in which students will gain an extensive knowledge about robotics doing fun activities which would include competitions among members of the club.

When analyzing and measuring the success of this project, we kept in mind that our solution will be carried out for a lengthy period of time. Hence we plan to measure the success in both the short and long run.

The way we plan on measuring our short term success is by analyzing the number of students who are willing to participate in our club. By studying the number of registered members, we can assess how many young adults we have been able to educate thus far.

If we see an increased participation rate, we will move to phase 2 which contains our long term goals. The potential long term success will be evaluated through measurement analysis based on the number of our members who pursue robotics as further studies.

## **Solution context**

Industry 4.0 technology has become a part of our lives and influences even the most simple tasks we carry out daily. It has enabled work to be done faster, more efficiently and often at a lower cost than before.

The basis of the 4th industrial revolution is the union of different technologies from different areas of study. This technology is shaping the future and will undoubtedly play a very important role in both the workplace and our daily life.

There are different types of industry 4.0 technology, for our solution we decided to focus on robotics which is likely to interest many young students.

Learning to work with robots would have several advantages such as encouraging and building computational thinking, helping to develop motor skills in young children as well as stimulating creativity.

Robots also provide a countless number of benefits in the workplace. They improve efficiency, quality and workplace productivity, they reduce costs and even help create more jobs

## **Solution target group**

For our solution, we came up with the idea of implementing a club independent from schools. This would give us wider reach than if we planned to set up individual clubs in each school, hence allowing us to help educate more young students on robotics.

We plan on focusing our club on children of ages 16 to 20. Mainly focusing on O/level and A/level students. They would be categorized according to their interest in robotics and how far they would like to progress in learning and developing their skill level.

The majority of students studying in Colombo are likely to have a Westernised mindset. Therefore in the initial stages, we plan on targeting students who study in the commercial capital of Sri Lanka as we feel that many students from this area are likely to show interest in this club and would be willing to join.

In order to attract more members we have come up with a few strategies. We plan on creating a website for our club from which anyone would be able to find out more information about Devol. We would also have a few introductory sessions recorded and posted to this website. We also hope to be active on several social media platforms such as YouTube, Instagram and TikTok.

A few of the members in the high competency category would be chosen to be ambassadors for our club. Each ambassador's role would be to promote the club within their schools amongst their classmates. They could even share information about Devol on their social media. This would be a highly effective way to promote Devol and increase awareness about the club, helping us to recruit new members.

## **Solution impact**

Our vision is to make sure that each participant of our club gains knowledge and experience from the courses of robotics we plan to initiate. We hope that each member would utilize the knowledge they gained by being a part of Devol in their day to day life as well as their workplace in the future. The club will also be created with the objective of creating a space where like minded students of different ages and backgrounds could meet and encourage one another to enhance their creativity.

Our ultimate goal would be to create a world where robots and people work together, making life easier and safer for everyone.

## **Solution tweet text**

Devol is a robotics club created for Sri Lankan youth. Whether you already know a lot about robots or you don't know anything at all, everyone is welcome to join in the fun. Become a member to meet like minded people and create friendships that will last a lifetime.

## **Solution innovativeness**

To make this solution more original we plan have various categories within our club: this means that we would have one section that focuses on children who want to learn robotics as a hobby and a separate section for those who display a higher competency and so may want to pursue a career in robotics. As their knowledge on robotics grows, the members will be have the option to join more advanced groups so that they could attend more rigorous sessions.

Our active social media presence would also give us a unique edge over other clubs. We plan on directly interacting with members and those intersted with joining so that we could create strong relationships through social media.

## **Solution transferability**

Our club Devol focuses on educating Sri Lankan youth on robotics. However, this solution can also be applied to other contexts. For example, the club could also open a branch which would educate students on other industry 4.0 technology such as 3D printing, VR and so on.

This initiative could also be used in other countries if the promotional strategies are adjusted accordingly.

## **Solution sustainability**

Phase 1 is one of our sustainability targets, as this is a short term objective to initiate the club and give it a stable pathway to be able to have long term goals, which will be discussed shortly.

Our plan to create a successful club includes the workshops as mention previously, holding free introductory workshops so the youth can get a feel of what is to come, and later hold weekly workshop for children conducted by professionally qualified trainers.

Our vision is to make sure that each participant of our club gains knowledge and experience from the courses of robotics we plan to initiate.

Phase 2 includes long term expansion goals such as opening club centers in rural areas and also becoming an affiliated center for an internationally recognized robotics program.

## **Solution team work**

The members of our team belong to the same age group and attend the same school. All our members got along with each other very well and we had fun doing this project. It would be easy for us to work as a team in the future as we have all grown quite close to each other and we all have an understanding of when to have fun and when to be serious and do our work.