



ERICSSON

Think, code,
create
@ Digital Lab!

Digital Lab

Digital Lab is a specially curated program just for you – young change-makers and the future of your country! Our fun Digital Lab will introduce you to awesome new technology through which you will not only learn amazing new things but will also be able to solve problems of the tech world easily. You're not alone here – we have highly skilled instructors here to guide and share their love of code with you. Be our next digital tech hero – feel confident and get ready to have fun with technology!

Now that you know what the Digital Lab is let's get to know your instructors better. The programming instructors at Digital Lab work with methods that inspire original thinking and problem solving. They have a great background in technology and leadership and are well-equipped

to act as your tech buddies, making coding and technology really easy for you to understand.

Our instructors are experienced in the use of pedagogical methods that break the monotony of traditional classroom format. They will guide you in pair-programming, a style of working with code that is applied worldwide in the software industry, in an inspirational space where children are seated in clusters as opposed to rows and are encouraged to look for solutions with their peers before approaching the instructor. This method teaches you about real-world problem-solving. In this way, the instructor will guide you in the logic of debugging and testing the software you create, rather than giving you the answers directly.



Courses

The Digital Lab program consists of five separate courses at foundation level where you can learn about basic robotics, artificial intelligence, electronics, how to create games and how to program your own LED charm in a fun and creative way.

Each course consists of five separate sessions. Normally one session is delivered per week over a five-week period. Each session is three hours long including breaks and includes repetition of elements from previous sessions to ensure that you learn easily and effectively.

Lego robotics course

Robots are the future! To make sure that you know all about them, the course will introduce you to the basics of control in robotics, much the same as those used in today's advanced robotics and you will do it in a fun way.

Game development course

You too can learn how to animate your own characters and how to make them move at your command. In this course we will teach you the basics

of game development using Scratch programming. You will learn how to create simple games based on ideas and suggestions that we give you at the start of each session.

Arduino electronics course

In this course you get to program using Arduino, a great way to learn more about electronics and coding at the same time! Learn to control traffic lights, a LED that changes color like a rainbow, or a speaker to play tones - maybe even create your own musical instrument?

Artificial Intelligence

In this course you will create and build a fun AI application and also gain an understanding of the useful real-world problems that AI can solve.

Creative Coding

Learn to mix arts and creativity with programming to make the world around us light up in color. In this course you can learn how to make your favorite gadgets light up (with code!)



The Challenge

The fourth industrial revolution has arrived, and we see a need for new skills emerging. Digital skills are right at the center of this evolution and a prerequisite for future employment for today's children and youth. It becomes a necessity for them to not just develop basic digital literacy skills but also to be exposed to 'higher level skills'. These higher level skills, such as computer programming and coding skills, have been known to support higher-order mental development as well as encouraging under-represented groups to pursue advanced ICT education and enter science, technology, engineering and mathematics (STEM) fields.

The solution

Digital Lab is an innovative education program targeted towards older children aged 11-14 to support them in their first encounters with the world of programming and new technologies. The program aims to inspire and provide you with the courage to approach technology and problem-solving by creating an open atmosphere for learning, where instructors share their love of code, thus inspiring you to participate in future technological studies. The program is primarily aimed at children ranging from 11 to 14 years of age, but it can be delivered to younger and older audiences depending on their previous exposure to basic programming knowledge.

Methodology

The Digital Lab instructors work with methods that inspire original thinking and problem solving. With backgrounds in technology, the instructors are well-equipped to act as sounding boards for their students, lowering the threshold of discussing technology and code. The instructors act both as guides to the Digital Lab course content, but also as role models for you, representing both genders and diverse backgrounds, ensuring education in technology is for everybody. Instructors are coached in the use of pedagogical methods that diverge from the traditional classroom methods.

Background

The Digital Lab program launched in 2014 from a collaboration between Ericsson and Universeum, a public science center in Gothenburg, Sweden. The content for the Digital Lab program is developed and curated by Ericsson with strong support from the Ericsson UniTeam in Gothenburg. The UniTeam is an organization of third-level technology students affiliated to Ericsson with the passion and motivation to pass on their love of technology to the next generation of learners. So far, the Digital Lab program has been delivered to hundreds of children in Sweden. Through Ericsson's 'Connect To Learn' initiative, we are now extending the reach of the program to other locations around the globe and developing additional modules on topics such as Artificial Intelligence. The Digital Lab program represents Ericsson's commitment to supporting the UN Sustainable Development Goals – especially Goal #4, with the aim of ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all.

For more information visit

<https://www.ericsson.com/en/about-us/sustainability-and-corporate-responsibility/technology-for-good/access-to-education>

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