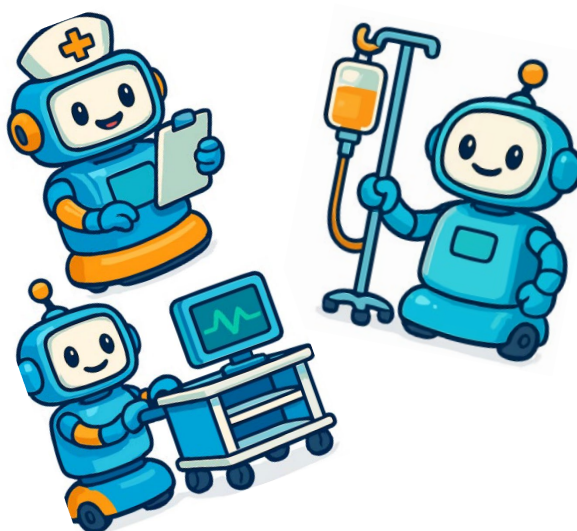


Mali kirurzi i roboti

Edukativni projekt za djecu koji je spoj znanosti, tehnologije i empatije.



O PROJEKTU

Projekt *Mali kirurzi i roboti* inovativni je edukativni program namijenjen djeci vrtićke dobi (3–6 godina), s ciljem ranog upoznavanja s medicinom, tehnologijom i osnovama zdravlja kroz igru, priču i kreativne aktivnosti.

U vremenu kada se djeca sve ranije susreću s tehnologijom, ovaj projekt nudi siguran i razumljiv način da je upoznaju bez straha, uz naglasak na povjerenje, znatiželju i osjećaj sigurnosti. Kroz pažljivo osmišljene radionice, djeca razvijaju pozitivan odnos prema liječnicima, medicini i tehnologiji koja pomaže ljudima.

Osnovna poruka projekta je jednostavna, ali snažna:

Tehnologija pomaže, ali ljudi brinu i osjećaju.

ZAŠTO JE OVAJ PROJEKT VAŽAN?

Djeca se često susreću s pojmovima bolesti, bolnica i tehnologije bez jasnog objašnjenja, što može izazvati strah i nesigurnost.

Projekt *Mali kirurzi i roboti* odgovara na tu potrebu tako što:

- smanjuje strah od liječnika i bolnica
- razvija povjerenje u stručnjake i zdravstveni sustav
- približava tehnologiju kao nešto korisno i sigurno
- potiče razvoj empatije i razumijevanja

Kroz interdisciplinarni pristup, projekt povezuje STEM područja (znanost, tehnologiju, inženjerstvo i matematiku) s humanim vrijednostima poput brige, suradnje i odgovornosti.

CROATIAN

KAKO DJECA UČE?

Radionice su prilagođene razvojnoj dobi djece i temelje se na četiri ključna elementa:

- **Priča i likovi** – Robo-Rukić i lavić Leo vode djecu kroz svijet medicine i robotike
- **Igra i pokret** – djeca uče kroz iskustvo i sudjelovanje
- **Kreativnost** – crtanje, modeliranje i izražavanje emocija
- **Emocionalna sigurnost** – naglasak na nježnom pristupu punim podrške

Djeca kroz aktivnosti razvijaju:

- znatiželju i interes za učenje
- finu motoriku i preciznost
- timski rad i suradnju
- empatiju i brigu za druge

ULOGA ROBOTIKE U PROJEKTU

Robotika se u projektu ne prikazuje kao zamjena za čovjeka, već kao **alat koji pomaže liječnicima**.

Djeca uče da:

- roboti ne donose odluke
- roboti ne rade sami
- roboti su produžetak ljudskog znanja i ruku

Na taj način razvijaju realno i zdravo razumijevanje tehnologije – bez straha, ali i bez iluzija.

O UDRUZI ORTHOING

Nositelj projekta je **Udruga za ortopedsko inženjerstvo ORTHOING**, neprofitna organizacija koja djeluje na sjecištu medicine, inženjerstva i edukacije.

Udruga se ističe kao jedna od rijetkih u Hrvatskoj koja sustavno povezuje:

- biomehaniku i ortopedsko inženjerstvo
- edukaciju i popularizaciju znanosti
- razvoj inovacija u zdravstvu

Kroz suradnje s međunarodnim institucijama poput Cambridgea, Harvarda i Imperial College London, Udruga donosi visoku razinu stručnosti i suvremenih znanja u edukativne projekte.

ORTHOING aktivno razvija projekte koji imaju stvaran društveni utjecaj, od edukacije djece do razvoja rješenja za osobe s invaliditetom.

CROATIAN

CILJ PROJEKTA

Cilj projekta nije da djeca postanu liječnici ili inženjeri.

Cilj je da:

- razumiju svijet oko sebe
- ne boje se nepoznatog
- razviju povjerenje i empatiju
- shvate da tehnologija može služiti ljudima

Jer kada dijete razumije, strah nestaje.

ZAKLJUČAK

Mali kirurzi i roboti nije samo edukacija.

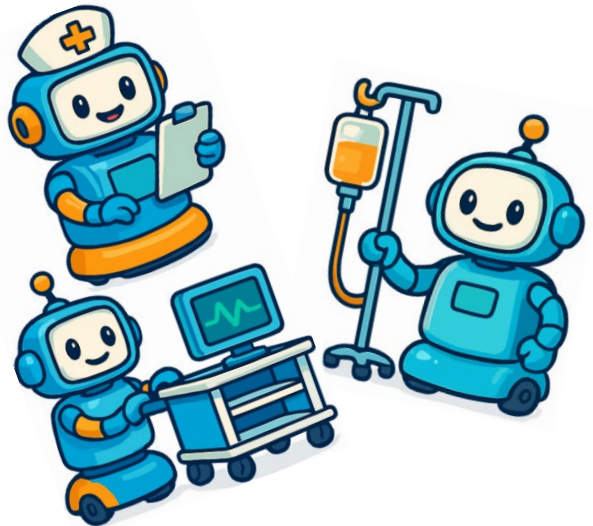
To je prostor u kojem djeca uče da su znanje, suradnja i briga temelj zdravog društva.

To je prvi korak prema generaciji koja će razumjeti tehnologiju, ali nikada zaboraviti čovjeka.



Little Surgeons and Robots

An educational project for children that combines science, technology, and empathy.



ABOUT THE PROJECT

Little Surgeons and Robots is an innovative educational programme designed for preschool children (aged 3–6), with the aim of introducing them early to medicine, technology, and basic health concepts through play, storytelling, and creative activities.

In a time when children are exposed to technology from an increasingly early age, this project offers a safe and understandable way to explore it—without fear, with an emphasis on trust, curiosity, and a sense of security. Through carefully designed workshops, children develop a positive attitude towards doctors, medicine, and technologies that help people.

The core message of the project is simple but powerful:
Technology helps, but people care and feel.

WHY THIS PROJECT MATTERS

Children are often exposed to concepts such as illness, hospitals, and technology without clear explanations, which can create fear and uncertainty.

Little Surgeons and Robots addresses this need by:

- reducing fear of doctors and hospitals
- building trust in professionals and the healthcare system
- presenting technology as something useful and safe
- encouraging empathy and understanding

Through an interdisciplinary approach, the project combines STEM fields (science, technology, engineering, and mathematics) with human values such as care, cooperation, and responsibility.

HOW CHILDREN LEARN

The workshops are tailored to children's developmental stage and are based on four key elements:

- **Storytelling and characters** – Robo-Rukić and Leo the Lion guide children through the world of medicine and robotics
- **Play and movement** – children learn through experience and active participation

ENGLISH

- **Creativity** – drawing, modelling, and expressing emotions
- **Emotional safety** – a gentle, supportive approach at all times

Through these activities, children develop:

- curiosity and interest in learning
- fine motor skills and precision
- teamwork and cooperation
- empathy and care for others

THE ROLE OF ROBOTICS IN THE PROJECT

In this project, robotics is not presented as a replacement for humans, but as a tool that supports doctors.

Children learn that:

- robots do not make decisions on their own
- robots do not work independently
- robots are an extension of human knowledge and hands

In this way, they develop a realistic and healthy understanding of technology—without fear, but also without illusion.

ABOUT THE CROATIAN SOCIETY FOR ORTHOPAEDIC ENGINEERING "ORTHOING"

The project is led by the Orthopaedic Engineering Association ORTHOING, a non-profit organisation operating at the intersection of medicine, engineering, and education.

The association is one of the few in Croatia that systematically connects:

- biomechanics and orthopaedic engineering
- education and science communication
- innovation development in healthcare

Through collaborations with international institutions such as Cambridge, Harvard, and Imperial College London, the Association brings a high level of expertise and contemporary knowledge into educational projects.

ORTHOING actively develops initiatives with real social impact, ranging from children's education to solutions for people with disabilities.

PROJECT GOAL

The goal of the project is not for children to become doctors or engineers.

The goal is for them to:

- understand the world around them
- feel safe in the unknown

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- develop trust and empathy
- understand that technology can serve people

Because when a child understands, fear disappears.

CONCLUSION

Little Surgeons and Robots is more than education.

It is a space where children learn that knowledge, cooperation, and care are the foundations of a healthy society.

It is the first step toward a generation that understands technology—but never forgets the human being.

