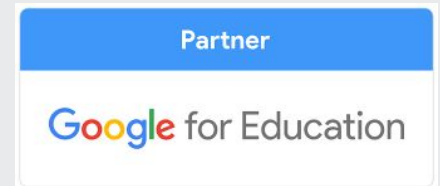


Robotics with Ottoky





**Eduardo
Alarcon Gallo**

Stakeholder del primer
Hackerspace in China

Founder TokyLabs

Eduardo Alarcón is the CEO of TokyLabs and creator of Tokymaker, an innovative prototyping tool that it's changing the way students and organizations approach technological innovation. Eduardo is also Maker, Stakeholder of XinChejian (First Hackerspace in China), TEDx Speaker and former Participant of NASA Space Elevator beam power challenge. He holds BS in Telecommunications, MS in Industrial Automation Eng. and six years of experience as researcher at UPC university in Spain, where he designed and implemented a multi-model power system for researching on Smart microgrids. He has seven publications in some of the top international scientific magazines to his name on topics ranging from static synchronous compensators to the NASA space elevator.

I will help you with

Being able to create your own projects mixing electronics, programming and new technologies such as IoT or Augmented Reality.



**Camilo
Parra Palacio**

Product Design Engineer

Founder of Otto DIY

Designer and Engineer by profession, roboticist and passion for 3D printing. The desire to undertake and pursue his dreams led him to China in 2014, while he worked for a multinational toy manufacturer in Shanghai, in his spare time he spent it in Xinchajian (the first Hackerspace in China).

There he began to play, learn and experiment with DIY robots. In 2016 he created and published the popular Otto robot, in response to the lack of easy-to-build, accessible educational robots.

In 2019 he decided to move to the Czech Republic, to continue promoting technology education from Europe.

I will help you with

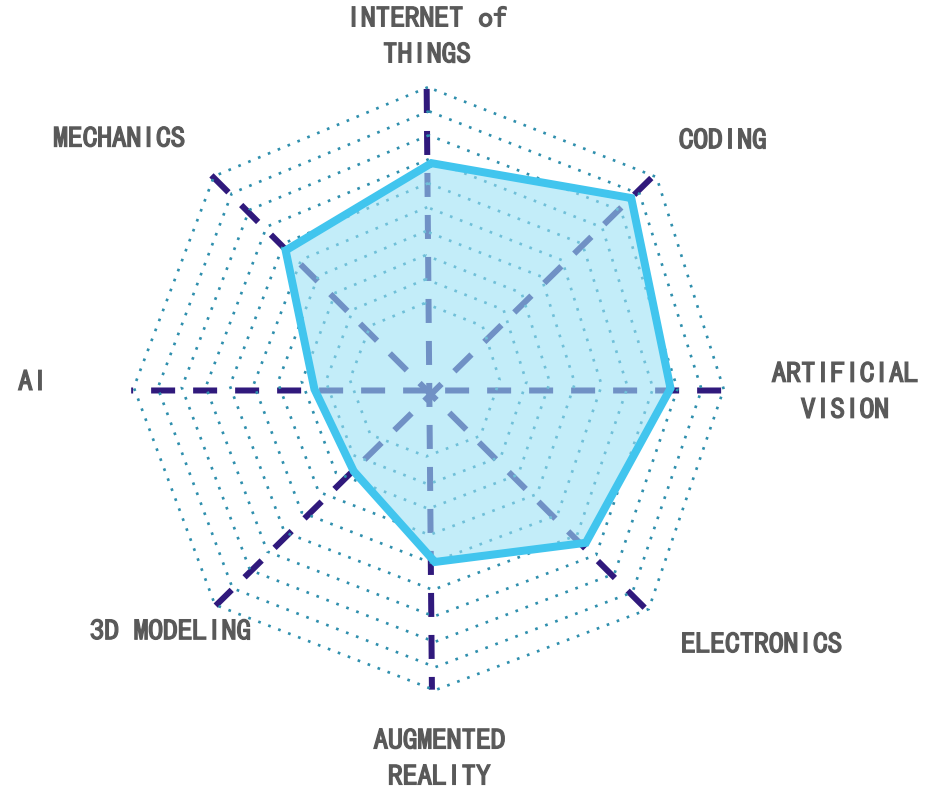
Design and make your own robots come true, with free or free CAD modeling, 3D printing and programming tools.

Skills

Ottoky program is oriented towards a high-tech and high-level skillset gain.

Through real life challenges and rapid prototyping, students can have exposure to cutting-Edge disciplines that will shape the future.

Projects and hand-on experiments will be framed under the UN Goals for sustainable development.



<⚡> TOKYMAKER

Tokymaker is just like a microcomputer.

It is composed of CPU (central processing unit) similar to your brain and memory, inputs (like your eyes, your nose, your tongue, and your ears) and outputs (like your hands, your legs, your mouth, etc).



<⚡> TOKYMAKER

TokyMaker is a great tool for people of all ages and all levels to learn about programming and make ambitious projects.

Users has generated amazing projects such as smart farm, smart house, and arcade games with TokyMaker.





PLUG AND PLAY



IOT



GRAPHICAL PROGRAMMING



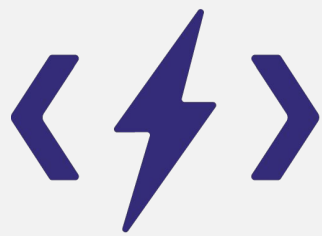
COMPUTER VISION



AUGMENTED REALITY



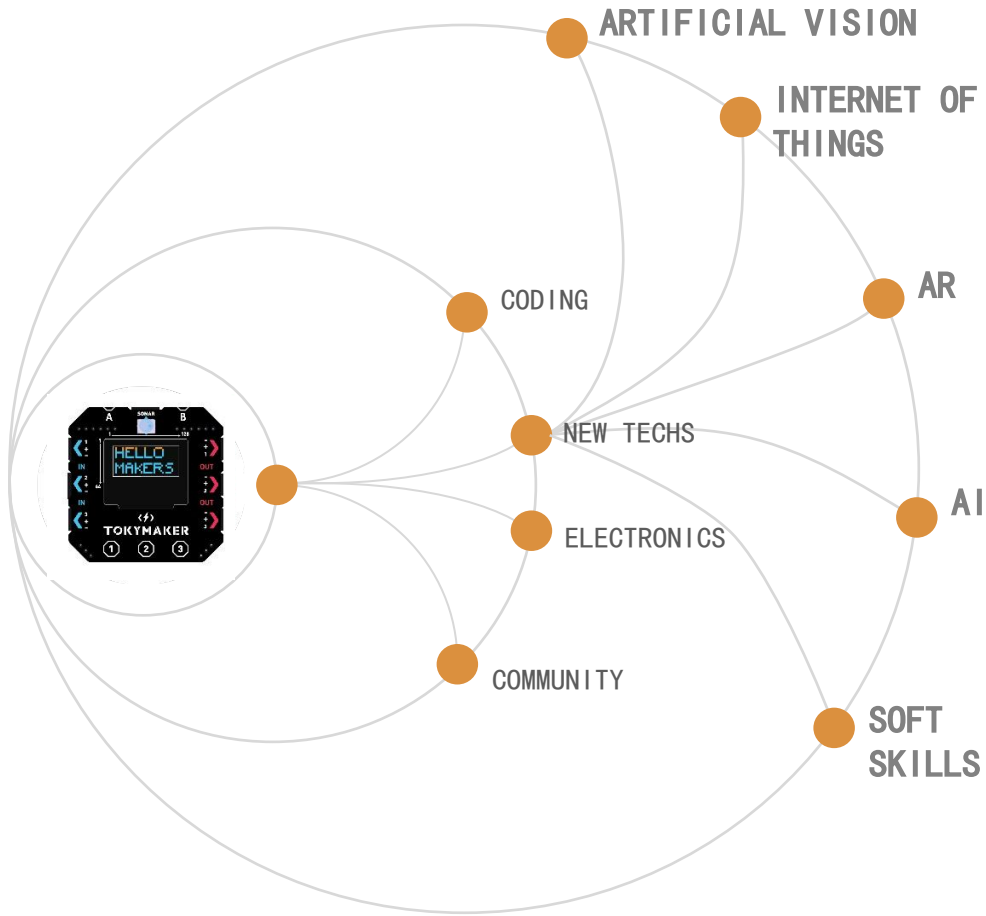
ARTIFICIAL INTELLIGENCE



TOKYO
LABS



Google
for Education

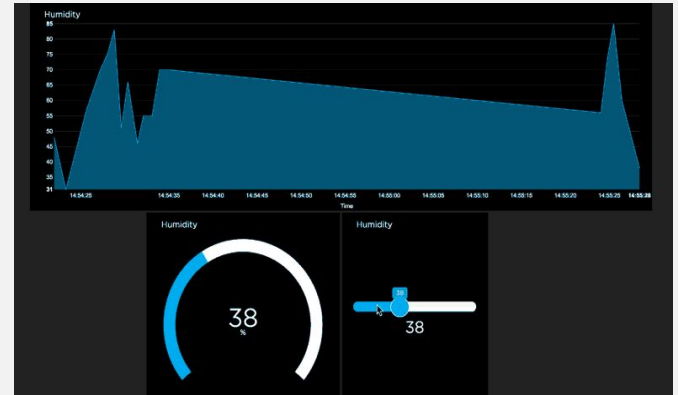


INTERNET OF THINGS

is the fourth largest industry in the world!

MARKET GROWTH IN 2018:

73%





**STEAM
Centre**

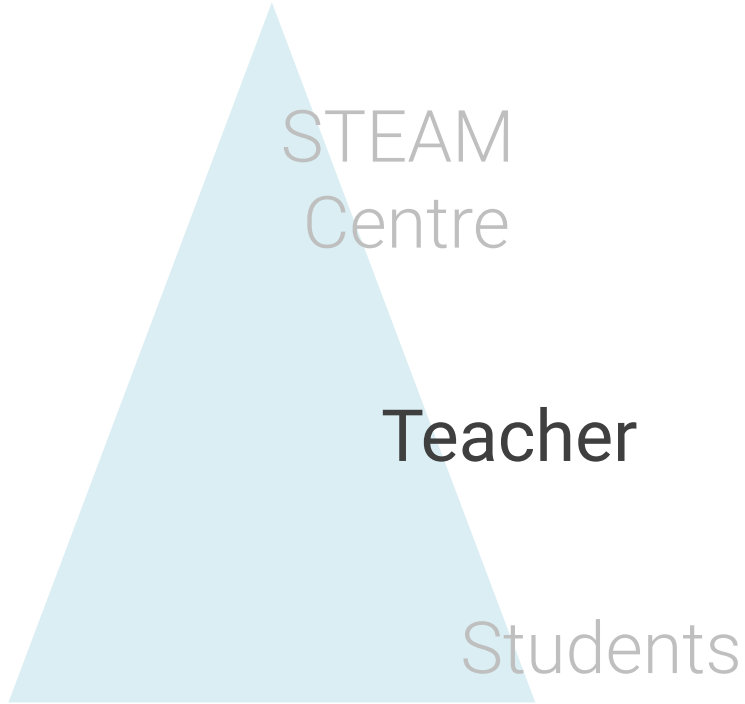
Teacher

Students

IT'S HARD TO FIND
A TEACHER WHO
CAN TEACH
TECHNOLOGY

Teacher-Ready™

~~IT'S HARD TO FIND~~
ANY ~~A TEACHER WHO~~
CAN TEACH
TECHNOLOGY



IT'S NOT EASY TO
TEACH COOL
STUFF. HARDWARE
NEVER WORKS

Plug&Play + Drag&Drop

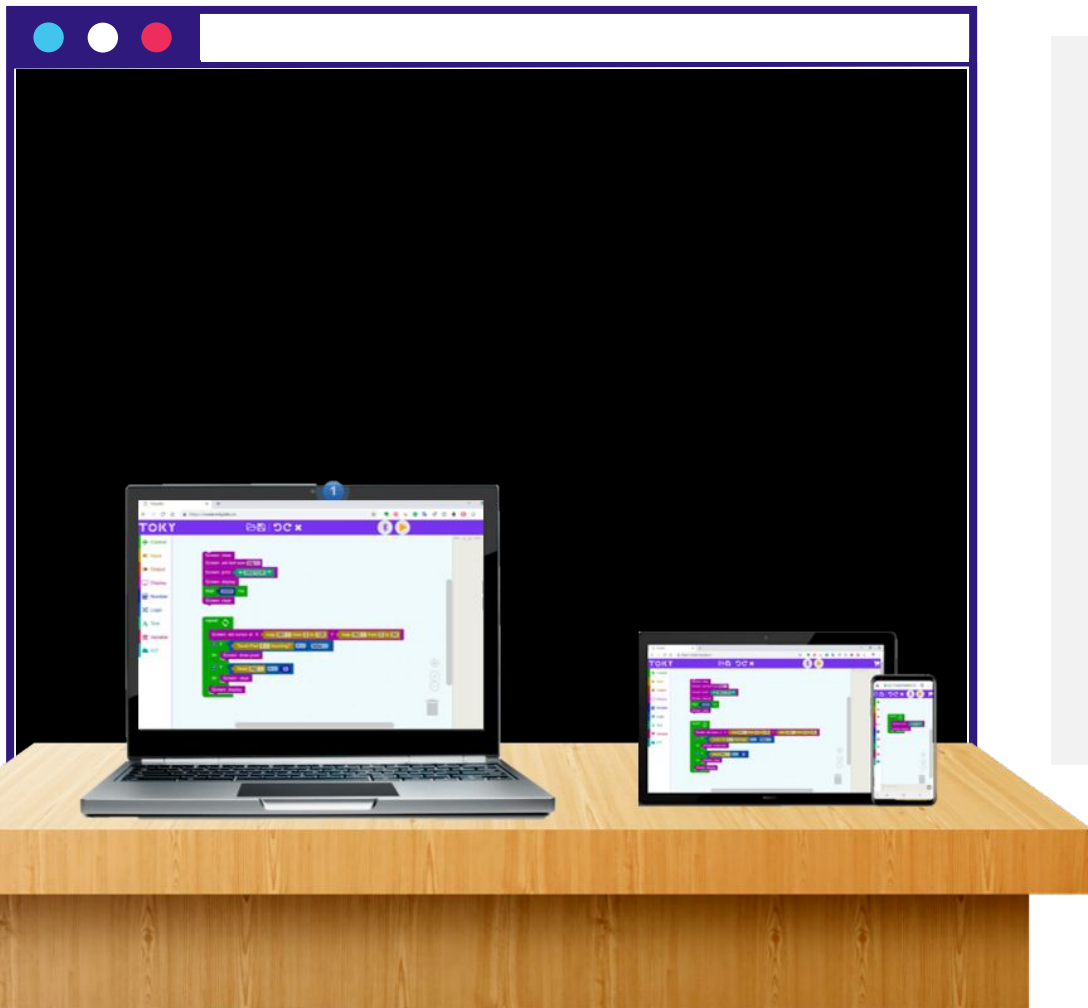
IT'S ~~NOT~~ EASY TO

TEACH COOL

STUFF.

HARDWARE ~~NEVER~~ **JUST**

WORKS

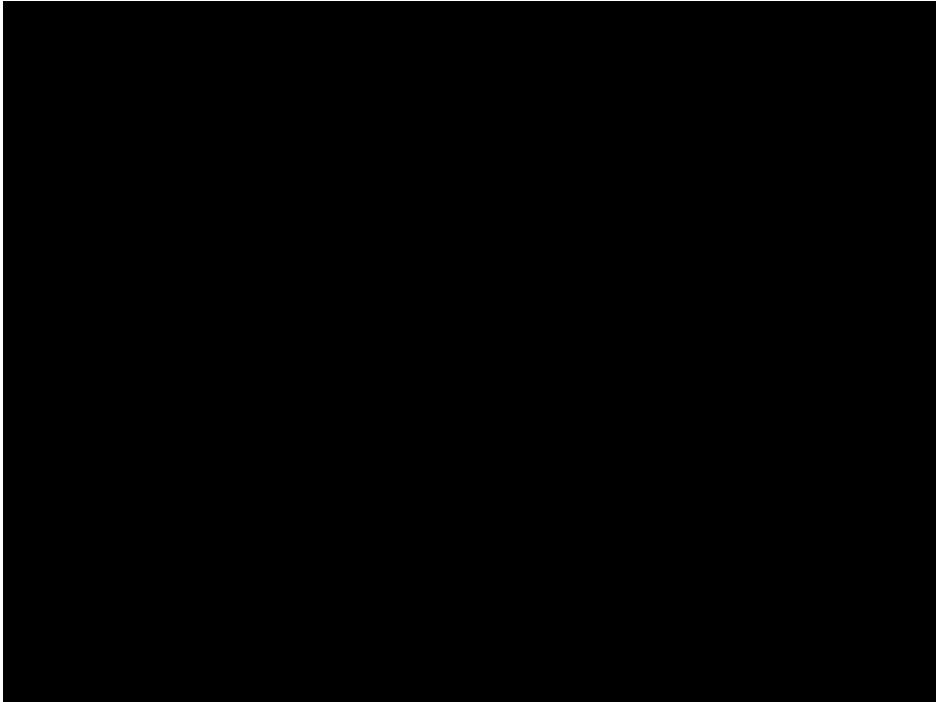


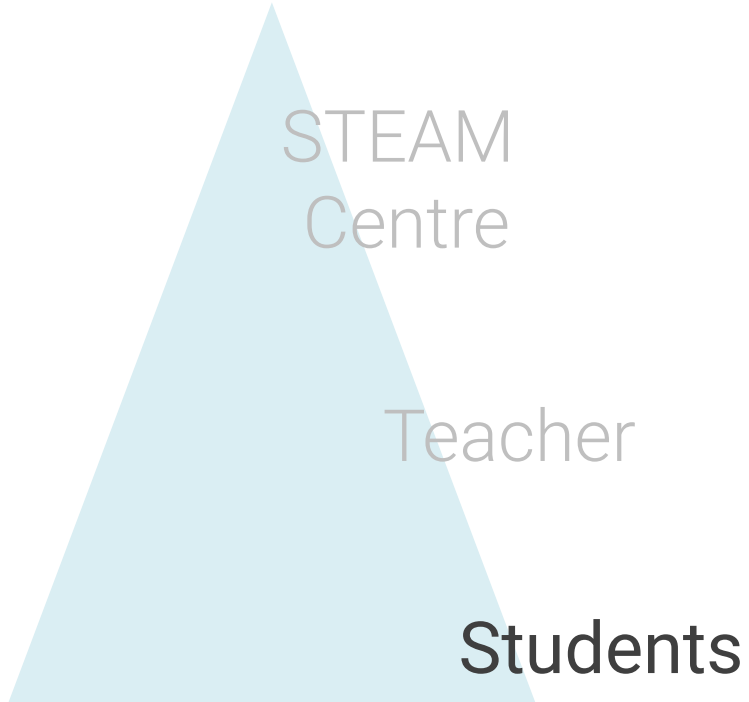
SOFTWARE

- **Online coding platform.**
No software needed.
- Wireless upload. No USB needed.
- Visual programming and **beginner friendly.**
- Expansive capability (console feedback, Gamepad, IoT)

HARDWARE

Plug and Play Electronics. **compatible** with Arduino sensors.
No need extension boards. No cables, no hassle!





I DON'T KNOW
HOW TO
INNOVATE YET.
I NEED TO STUDY
MORE.

Creative Tech

~~I DON'T KNOW~~

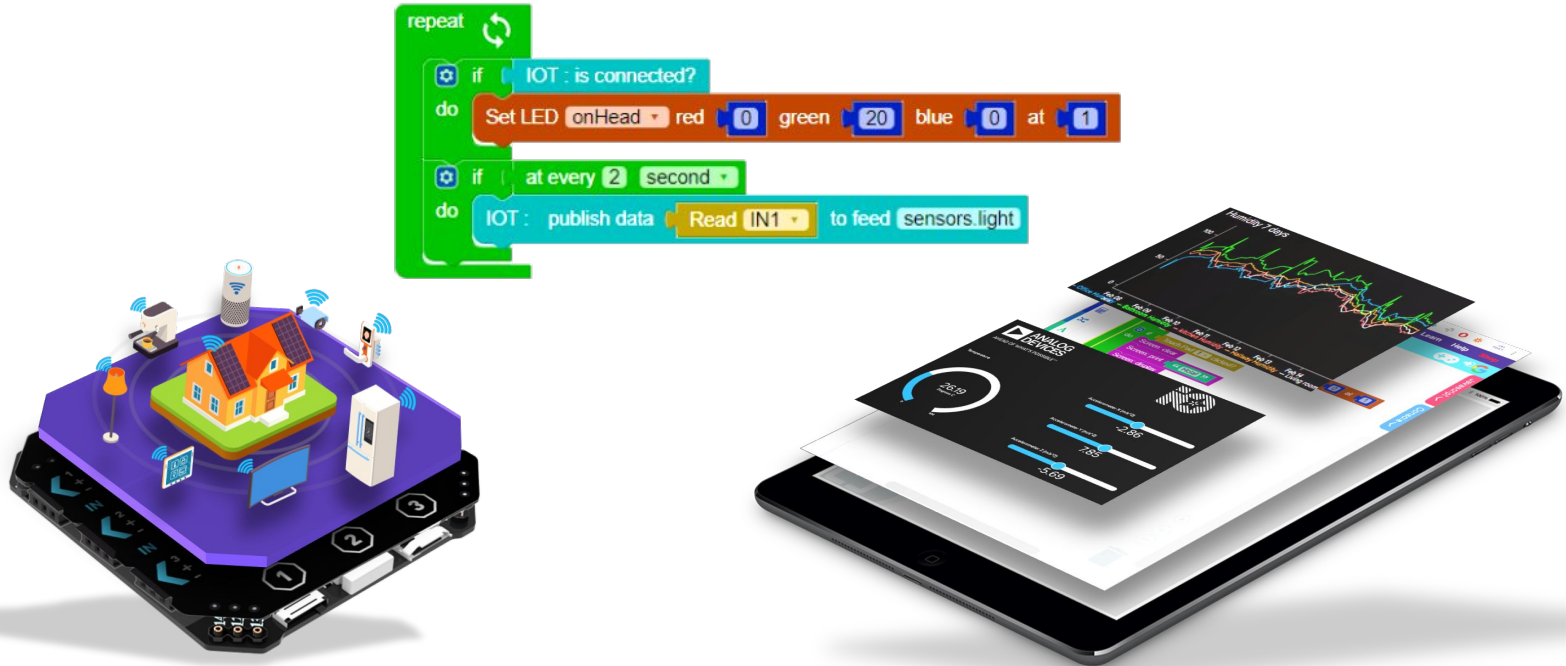
~~HOW TO~~

INNOVATE **NOW**

I WANT TO STUDY
MORE.

Creative Technologies: Internet of Things

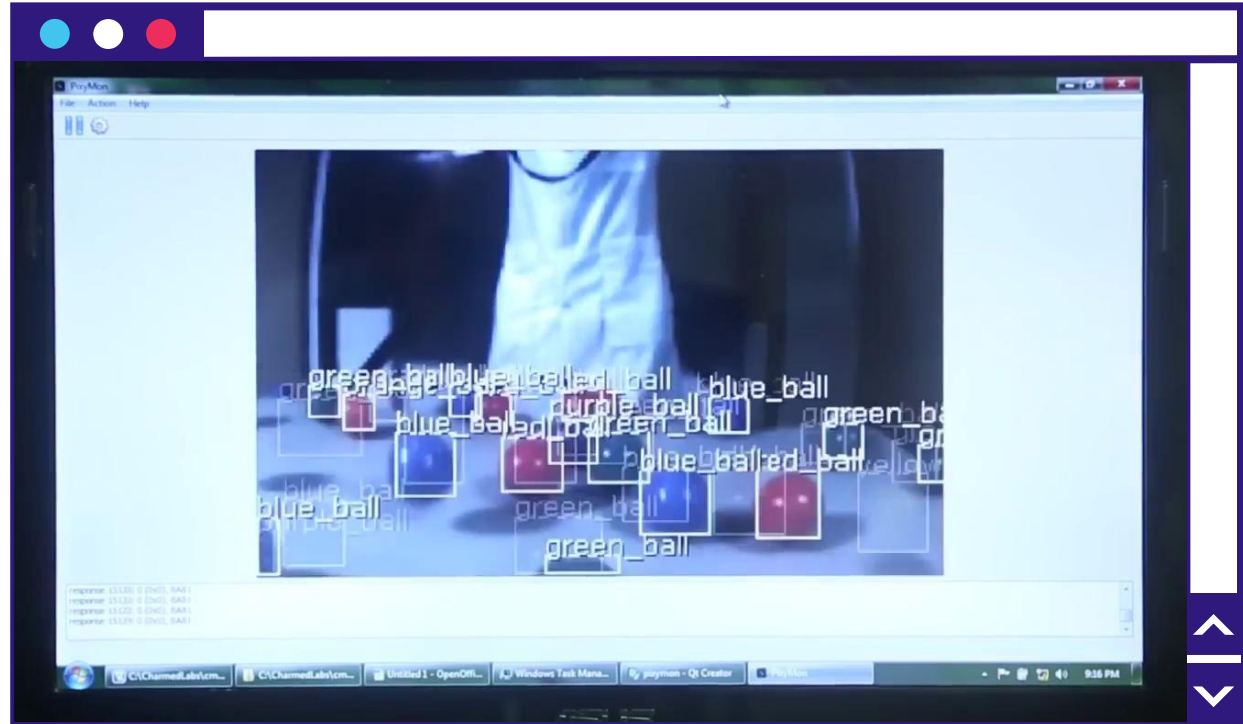
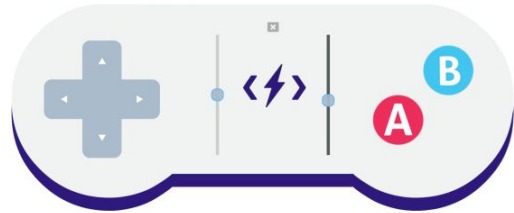
A set of creative and intuitive technologies that let you focus on the objective of the Project: the student's development.



Creative Technologies: Artificial Vision

A set of creative and intuitive technologies that let you focus on the objective of the Project: the student's development.

```
repeat
  if Gamepad Button A clicked?
  do
    Set servo OUT1 to Read Gamepad SliderA
```



Creative Technologies: Augmented Reality

A set of creative and intuitive technologies that let you focus on the objective of the Project: the student's development.



```
repeat while true
do
  AR: Create 3D MODEL element with ID "logo"
  AR: Update 3D MODEL element with ID "logo" Click to set files
  AR: Set rotation for element with ID "logo" to { X: 0 Y: 90 Z: 0 }
```

SHOWCASE

During a Workshops, we suffered a terrible Earthquake

As a result to the experience, students made an **Earthquake detector.**



SHOWCASE

Connected to the **Government broadcasting alert signal** in real time.

Creates sounds and lights to warn the population in presence of such event

**EARTHQUAKE
ALERT!**



SHOWCASE

Furthermore, turns of the light at home to **prevent from fire!**

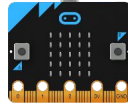


Why use Ottoky?

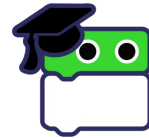
Tokymaker is the only option in the education market that enables IoT and new technologies for beginners.

Beginner

**Coding
OR
Electronics**



IoT



TOKYMAKER

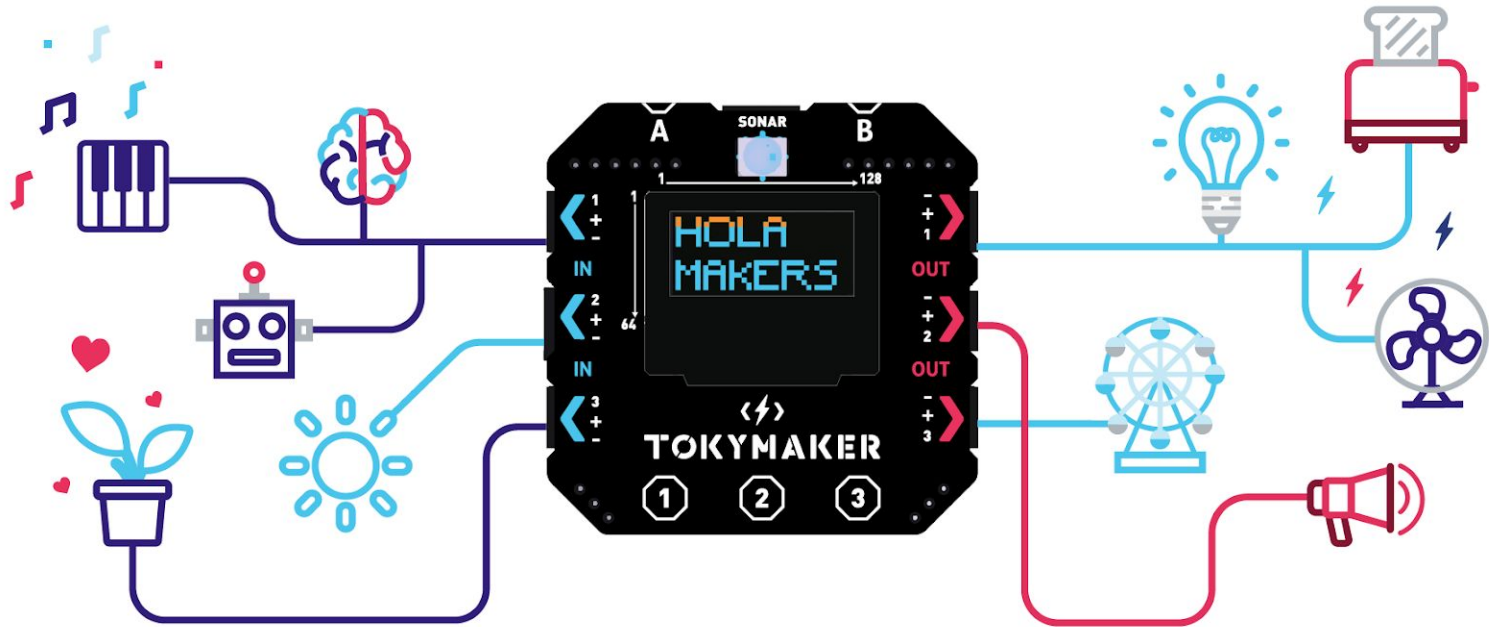
**Coding
AND
Electronics**



Expert


WILL STUDENTS KEEP THE HARDWARE?

YES! All the material will be given away to the student.
Each one of the students will have one full kit.



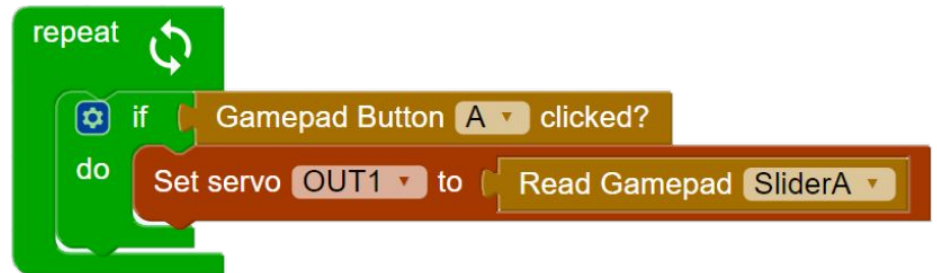
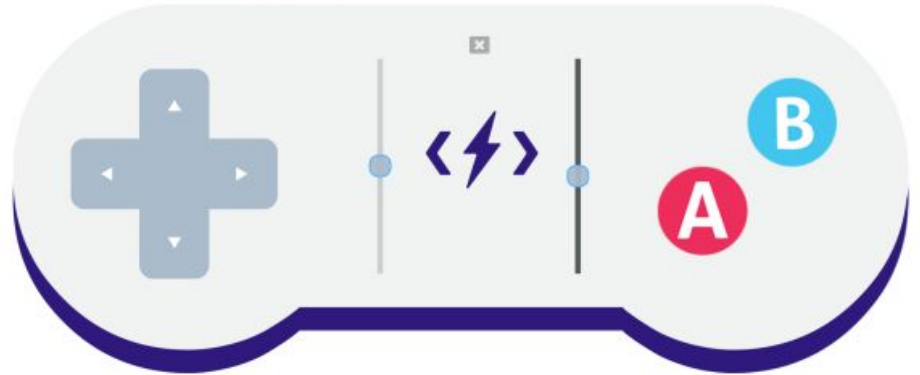
GAME PAD

CONTROL YOUR PROJECTS REMOTELY IN REAL TIME



A screenshot of the Scratch block palette showing various categories and their associated blocks. The 'Input' category is highlighted in dark blue. The 'GamePad' block is also visible in the 'Variable' category.

- Control
 - Read IN1
- Input
 - Button A clicked?
- Output
 - Button A pressing?
- Display
 - Touch Pad 1 clicked?
- Number
 - Touch Pad 1 touching?
- Logic
 - read distance (cm)
- Text
 - GamePad
- Variable
 - Gamepad Button A clicked?
 - Gamepad Button A pressing?
- Functions
 - Read Gamepad SliderA
- IOT
 - map IN1 from 0 to 1023



A Scratch code block showing a 'repeat' loop with an 'if' condition and a 'do' block. The 'if' condition is 'Gamepad Button A clicked?' and the 'do' block is 'Set servo OUT1 to Read Gamepad SliderA'.

```
repeat (1) times  
  if Gamepad Button A clicked?  
    do Set servo OUT1 to Read Gamepad SliderA
```

AUGMENTED REALITY

Thanks to our patented learning system, students will be able to do their first Augmented Reality programs from scratch.



ARTIFICIAL INTELLIGENCE ASSISTANCE

Students will be able to incorporate AI engines in their own projects.



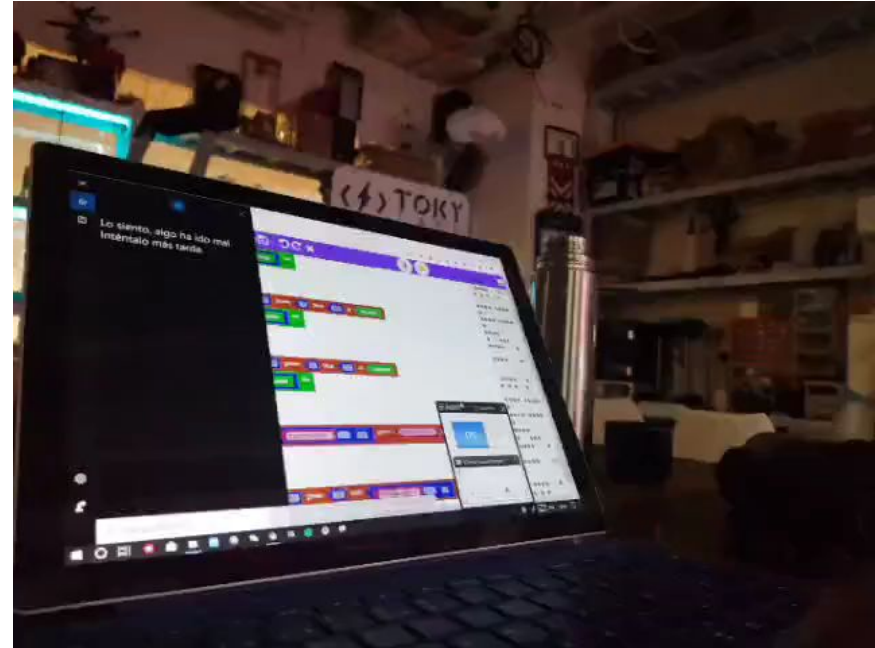
Hi. I'm Cortana.
Ask me a question!



alexa



Google Assistant



ARTIFICIAL VISION

Students will make projects with the fastest object recognition camera for robotics in the market. (camera is not property of students)



Let's Start!

Next Chapter

