INTERACTIVE CODING, STEAM & AI EDUCATION

FOR KIDS OF ALL LEVELS

AGES 4+
Is it a Genie or a Robot? THIS IS ‘GENIBOT’!

GENIBOT is an educational coding robot for young learners of all ages and levels — from four years old to late teens. GENIBOT makes it fun to learn STEAM skills, coding and AI, allowing kids to do many things:

- Learn basic coding with physical cards instead of computers — completely analog!
- Graduate to block coding and basic AI with Scratch 3.0
- Connect to a network via Bluetooth 5.0 to learn together with peers.
- Attach accessories such as arms, a sensor holder or a pen holder.
- Interface with other GeniRobot products such as the upcoming GENICAM.
- Learn the basics of digital coding with the fun GENIBOT app for Android and iOS.
- Learn AI programming with Python.
- Customize their GENIBOT with LEGO.
- Enjoy interactive education with their teachers with the LIMS learning platform.
- Interact with GENIBOT in English plus one more local language.
Developed by educational experts from the KAIST Global Institute for Talented Education, GENIBOT encourages the ongoing exploration of all STEAM fields. GENIBOT is the only all-in-one coding robot that can be used at home for self-study and also flawlessly integrated into programming classes at multiple grade levels.

WHY GENIROBOT?

Over the past 20 years, coding education has become commonplace in schools around the world and is now heralded as one of the most important skills for young generations to learn. Educational robots are growing in popularity as a way to get kids interested in coding, and now command over 27% of a $2.5 billion global EduTech market.

Despite this, teachers can’t use existing coding robots for true interactive education experiences. GeniRobot’s cloud-based LIMS solution is the first coding education platform to solve online communication problems, making remote guided learning possible.

FROM CODING EDUCATION TO STEAM & AI
ALL-IN-ONE GENIBOT

Genibot is more versatile than any other coding robot on the market:

- Unplugged and app-based coding (Android & iOS)
- Learn how to interact with a variety of Arduino sensors
- Braille cards included for visually disabled students (available by request)
- Compatible with various devices (Android/iOS devices, computers)
- Competitive price with more features (highly cost effective)
- Compatible with every kid’s favorite toy — LEGO!
- Multilingual: supports English, plus one language from ANY local region
- Encourage creative group behavior with Bluetooth 5.0 star network
- Perform a wide range of activities with OID (Optical Identification Dot) technology
- Support Scratch 3.0, Entry & Python

BLUETOOTH STAR NETWORK

GENIBOT supports the Bluetooth 5.0 standard for real-time communication and feedback in a star topology network. Up to 40 robots can be connected as a group, linking with other groups in a tree hierarchy structure, opening up new possibilities for group education.
The first service of its kind, GeniRobot’s proprietary LIMS platform is a cloud-based interactive coding education solution. It enables two-way communication for educators and students to utilize GENIBOT together in one-on-one or group classes, both in person and remotely.

Instructors can control each student’s GENIBOT in real time, no matter where the student is located in the world. Students can also learn by themselves and teachers will be provided with full activity reports, helping make individualized instruction possible for every student.
Unplugged is a revolutionary learning system that uses physical cards instead of computers to develop computational thinking in young learners.

GENIBOT can be programmed to perform various actions by placing it on top of any combination of 47 different cards. Possible actions include:

- Move
- Rotate
- Follow a line
- Move on a grid
- Perform calculations
- Play musical notes
- Connect to Bluetooth
- Program new functions
...and more!

It is possible to build complex programs with Unplugged cards. Make GENIBOT perform an entire song and dance while changing colors. GENIBOT can even interact with physical puzzle boards and stickers. It’s true analog learning for the digital age.
It’s also possible to control GENIBOT via Bluetooth with an app for iOS and Android. The app includes all of the same functions as the Unplugged cards, and also has a remote control to move GENIBOT in real time or program directions visually.

With the GENIBOT app, you can:

- Control motion, speed and color
- Turn on/off line tracing mode
- Draw pictures with the pen attachment
- Code mathematical formulas
- Do Unplugged card coding
- Program GENIBOT to perform music
- Control GENIBOT’s tilt

STEP 02 LEARN TO CODE
Once kids have mastered controlling GENIBOT with the app and Unplugged cards, they can graduate directly to writing programs for GENIBOT on a computer. Three options are available that open GENIBOT’s possibilities:

<table>
<thead>
<tr>
<th>ENTRY</th>
<th>SCRATCH 3.0</th>
<th>PYTHON</th>
</tr>
</thead>
<tbody>
<tr>
<td>An educational platform that allows young learners to easily learn the principles of programming.</td>
<td>An introductory programming language that enables children ages 4 and older to create their own interactive stories and games.</td>
<td>A full-featured object oriented programming language. Python can be used as the next step to make GENIBOT do almost anything — the imagination is the limit.</td>
</tr>
</tbody>
</table>
GENIBOT inspires the imagination and innovation every step of the way, encouraging learners to design, build, invent and experiment with code.

A number of add-on accessories are available that allow kids to personalize their GENIBOT and completely change their learning experience:

- Pen holder: Make GENIBOT draw as it moves!
- Module holder: Turn your GENIBOT into an elephant!
- Arm: Teach GENIBOT to play soccer!
- Block holder: Snap LEGO on to GENIBOT to make a car, a giant robot, or anything else!

Using the included 5-pin connector, advanced learners can also interface GENIBOT with a wide range of external components to learn in a hands-on way how a robot perceives its environment. Connection possibilities include: Arduino sensors, joysticks, servo motors, ultrasound distance sensors and a micro:bit, among many other options. The sky’s the limit!
GENIBOT and the LIMS learning platform are just the start. GeniRobot is preparing to launch a number of related products soon and moving beyond coding education to develop an overarching solution that incorporates AI and Big Data.

OUR GOAL IS TO BECOME A GLOBAL EDUTECH MARKET LEADER BY 2023.

GENICAM (Coming November 2020)

A full-featured wireless webcam with AI object detection, GENICAM can be combined with GENIBOT’s movement capability to enable autonomous driving. It’s the perfect tool for AI coding education.

- Teachable Machine and TensorFlow compatible
- Supports basic video filming and motion detection
- Wireless Wi-Fi & Bluetooth

DEVELOPMENT ROADMAP

<table>
<thead>
<tr>
<th>Category</th>
<th>Item</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device</td>
<td>GENIBOT</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>GENICAM</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>GENISTICK</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Solution</td>
<td>Scratch 3.0</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>3D Simulator</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Python</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>LIMS</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Content</td>
<td>Kindergarten (4-7)</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Elementary (8-13)</td>
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</tr>
<tr>
<td></td>
<td>Disabled Students</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Seniors</td>
<td></td>
<td></td>
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</tbody>
</table>
### TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bluetooth</td>
<td>Bluetooth 5.0 Multiprotocol (30 m. range)</td>
</tr>
<tr>
<td>OID sensor</td>
<td>OID sensor for unplugged card coding</td>
</tr>
<tr>
<td></td>
<td>3-axis acceleration sensor for tilting codes</td>
</tr>
<tr>
<td></td>
<td>Optical image sensor for detecting and decoding OID code</td>
</tr>
<tr>
<td>Light sensors</td>
<td>4 light sensors, 4 illuminating green LEDs and 4 color LEDs</td>
</tr>
<tr>
<td>Built-in speaker</td>
<td>Built-in speaker</td>
</tr>
<tr>
<td>Motor</td>
<td>2 stepper motors</td>
</tr>
<tr>
<td>Memory</td>
<td>Nand flash memory, 128 MiB</td>
</tr>
<tr>
<td>Interface</td>
<td>External terminal port for Arduino AI/DI/DO and servo motor</td>
</tr>
<tr>
<td>Battery</td>
<td>Rechargeable LiPo battery, 1000mAh</td>
</tr>
<tr>
<td>Firmware</td>
<td>OTA (Over the Air) firmware updates with new features</td>
</tr>
</tbody>
</table>
www.genirobot.com

Tiny but Mighty!