



AGILE ROBOTS



## Meet Aini

The robotics learning experience



# Say hello to Aini

Aini enables students aged 8 to 15 to program and operate real robots like professionals.







# From simulation to reality

Aini connects simulation to the physical world directly in your classroom. Students first learn how to use logic, geometry and physics to create successful programs in a 3D simulation environment, and then apply their knowledge directly on a Yu 5 Industrial robot.

## Training the experts of tomorrow

Aini is Agile Robots' educational framework and integrated platform that demonstrates foundational concepts of logic, computer science, mathematics and physics by teaching users to control a robot. With an interactive web application, students and their teachers are introduced to coding concepts to perform versatile and precise operations with a multisensory robotic arm.

### Program with blocks

Thanks to the integrated Google Blockly visual coding feature, students can autonomously program simple tasks, utilizing pre-given examples and a step-by-step guided tour.

### 3D simulation

The simulation mode allows users to test and validate tasks before physically realizing them. Students can choose from a variety of different Agile Robots robotic systems, end-effectors and custom 3D objects for an immersive experience.

### Hands-on experience

After successfully programming and simulating a task, students can implement their project in real life by operating a Yu 5 Industrial. The robot is safe, easy-to-use and offers an ideal hands-on learning experience.

### Web application

The web app equips students with a virtual 3D simulation, user accounts, seamless connection to Agile Robots hardware systems, code view in different programming languages and more. All visible in one interface. Thanks to the clearly structured control panel, parameters such as end-effector state activation, the robot's coordinates or the angles of the robot's joints are directly under the control of the students – no expertise needed. The visual coding interface based on Google Blockly allows anyone to program and interact with the robot without the need for previous coding experience.

### Yu 5 Industrial + cargo table

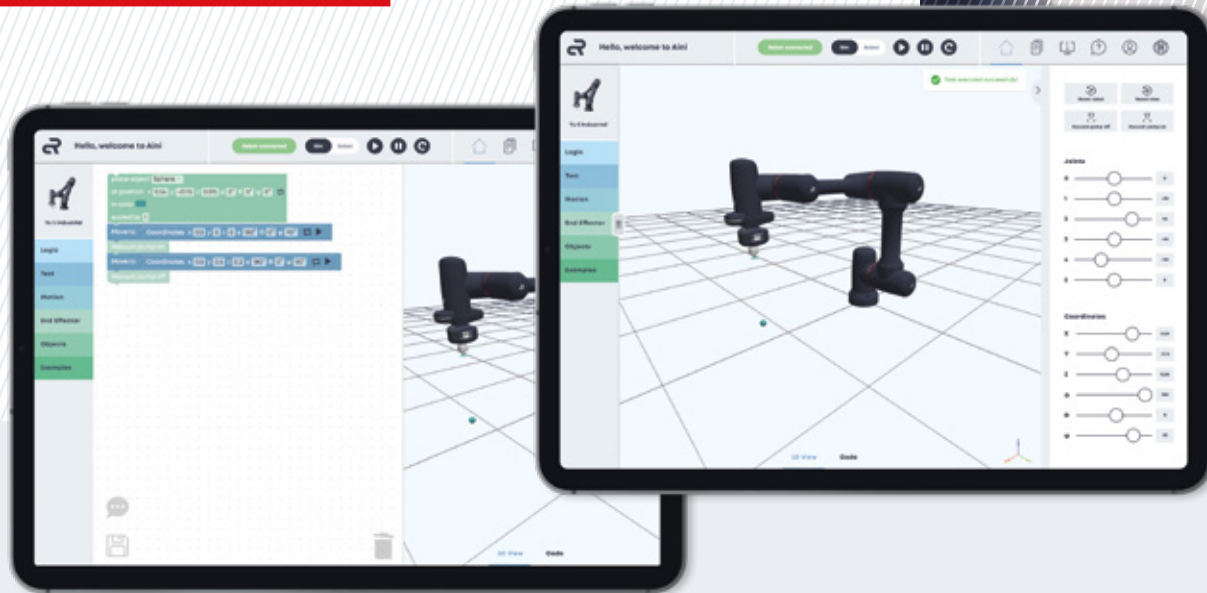
Safe, easy-to-use and precise. The Yu 5 Industrial is the perfect tool for beginners and professionals alike, guaranteeing seamless integration and secure human-robot collaboration. Mounted on a compact cargo table, the robot can perform a variety of tasks provided by the students. Pick & place or other interesting assignments are no problem for the Yu 5 Industrial.

### Educational cooperation

In addition, it is also possible to upgrade Aini by adding the educational cooperation package. This optional extension can be tailored directly to the school's needs and offers further guidance for students and teachers alike. To enhance the students' learning curve, the educational cooperation package provides the possibility of different immersive hands-on opportunities. This option is not included in the regular scope of delivery.



# Discover the intuitive interface



## Control the robot

Choose between controlling the robot's position and orientation or the angles of its joints. Use different end-effectors, such as a Schunk collaborative gripper or a Schmalz vacuum pump.



## Program with blocks

The visual coding system is built with the open source JavaScript library Blockly and customized for programming robot systems.



## Switch between modes

Easily teach new skills in simulation mode or directly connect to the real hardware.

## Guided tour

Learn to use the features of the web app step by step.

## Choose robotic systems

Combine different robotic arms with various end-effectors to change how you can interact with the world around it.

## Explore the code

Take a deep dive into the code you created using blocks.

## Import 3D objects

Place custom 3D objects in the simulation area and control the robot's interaction with them.

## Manage tasks

Save, store and load tasks for students and see comments from a teacher or admin to learn and improve.

## Create groups

Invite students into groups, see the tasks of all users and track their progress by leaving feedback.

## Access exclusive features

Create your own account, manage your profile, and discover more features.



# Gain hands-on experience

The lightweight robot Yu 5 Industrial comes mounted on a compact and mobile cargo table, allowing students to enjoy hands-on lessons in any classroom.

## Safe collaboration

Safety functions such as emergency stop, enabling device, safe operating modes, safe power, and force and cartesian position limiting are conformant to international standards.

## Integrated operational modes

- Joint position control
- Cartesian position control
  - Hand guiding
- Self-collision avoidance
  - Virtual walls

## Multisensory and smart

Multisensory robot with integrated force/torque sensors in every axis. Advanced sensor technologies ensure safe collaboration and tactile handling of objects.

# Inspiring minds of aspiring talents

"Our students, ranging from 8 to 17 years of age, and teachers were impressed with their engagement on the coding platform created by Agile Robots and the interactions and learning experiences with the cobots and Agile engineering team. We are looking forward to integrating cobots into our curriculum and collaborating more with Agile Robots."

**Armin Martin**

PYP Coordinator & Maker Lead Education  
Munich International School

"Upon meeting Aini, their imagination was actually exceeded by reality! The students were surprised by two aspects of Aini: firstly, how truly agile the robot was and secondly that even they as students were capable of programming its actions through the web app. [...] This real life, accessible interaction has provided a fascinating and memorable learning experience for our students which has shifted their thinking boundaries. Thank you, Agile Robots, for making our students feel like robotic engineers!"

**Ruth Buckley**

Secondary Educational Technology Integrator  
Bavarian International School



**Want to know more  
about our educational products?**

There is a growing demand for schools and universities to offer relevant courses to educate students and staff on how to program and interact with robots. Agile Robots is proud to be part of this process.

© Agile Robots SE  
Staffelsestr. 8  
81477 Munich

**+49 89 277 814-101**  
**education@agile-robots.com**

**[www.agile-robots.com](http://www.agile-robots.com)**