

# 1

## 10 Best Programmable Drones | Updated List March 2024

Review of the top 10 best programmable drones in the market and things to consider before buying

[Link](#)

## 10 Ways Drones Are Being Used In The Classroom

Discusses classroom integration of drones.

[Link](#)

## 6

### 6 Best Free Drone Mapping Software Solutions

"Drone mapping takes more skills than just being able to fly a drone well. You will need to have good planning skills, experience in doing surveys, and an understanding of the fundamentals of photogrammetry. You will also be dealing with lots of data and need to go through the entire process of data collection, processing, and presentation.

With planning and data analysis in mind, good software is an essential tool in drone mapping. While most of these software packages require an expensive subscription, there are also some options that are free to use."

[Link](#)

## A

### **A Multi-Agent System Using Decentralized Decision-Making Techniques for Area Surveillance and Intruder Monitoring**

The design description of a decentralized swarm of quadcopters designed to monitor an open area and detect intruders.

[Link](#)

### **A systematic review of Drone integrated STEM education at secondary schools (2005–2023): Trends, pedagogies, and learning outcomes**

A systematic review of Drone integrated STEM education at secondary schools (2005–2023): Trends, pedagogies, and learning outcomes

[Link](#)

### **AI beats champion human pilots in head-to-head drone races**

The Swift AI has beaten expert drone racers in high-speed races using an on-board computer that fuses artificial intelligence and classical algorithms – a method that could speed up delivery drones

[Link](#)

### **Air:bit - The micro:bit drone. Build, code and fly!**

Building a drone

[Video](#)

## **Air:bit Introduction & Unboxing - Coding & Testing (by MakeKit)**

How to build a drone

[Video](#)

## **ArduPilot**

ArduPilot enables the creation and use of trusted, autonomous, unmanned vehicle systems for the peaceful benefit of all. ArduPilot provides a comprehensive suite of tools suitable for almost any vehicle and application. As an open source project, it is constantly evolving based on rapid feedback from a large community of users.

[Link](#)

## **Are drones bad for the environment?**

The damage caused by drones in environment

[Link](#)

## **Autonomy in UAV Civilian Applications**

The multiple advantages of using unmanned aerial vehicle (UAV) platforms in multiple civilian applications. For their operation in the airspace, it is necessary to ensure safe flights, through relevant algorithms and decision-making methodologies. This article examines some of them.

[Link](#)

## B

### **Best Drones for Schools**

Best choices of drones for education

[Link](#)

### **Best resources to learn about everything related to drones**

Comprehensive resources for drone learning.

[Link](#)

### **Bio-Inspired Principles Applied to the Guidance, Navigation and Control of UAS**

Description of a series of biologically inspired principles that have been applied to Unmanned Aircraft System (UAS) visual guidance, navigation and control. Insects, even with their small brains and limited intelligence, have overcome many of the weaknesses of the technological capabilities we have today for autonomous aerial guidance for this and are used as a source of inspiration.

[Link](#)

### **Build a Drone**

A step-by-step guide to designing, constructing, and flying your very own drone

[Link](#)

## C

### Can You Build A Drone From A Raspberry Pi?

While the must-have parts list isn't exhaustive, grasping the importance of key components is crucial. If you're thinking about taking your drone game to the next level, consider throwing a Raspberry Pi into the mix

[Link](#)

### Classifications, applications, and design challenges of drones: A review

Our presentation of an assortment of flying drones ranging from unmanned aerial vehicles to smart dusts at both ends of this spectrum, with their newly defined applications. While the limitations of existing drones, proposed solutions for the next generation of drones and recommendations are presented and discussed.

[Link](#)

### Control Systems Lectures!

Our presentation of an assortment of flying drones ranging from unmanned aerial vehicles to smart dusts at both ends of this spectrum, with their newly defined applications. While the limitations of existing drones, proposed solutions for the next generation of drones and recommendations are presented and discussed.

[Videos](#)

## D

### Drone Building Workshop

A step-by-step guide to building your own drone.

[Link](#)

### Drone delivers defibrillators for cardiac arrest faster than ambulance

People who have gone into cardiac arrest can get treatment faster if a drone delivers a defibrillator, but there needs to be someone nearby trained in CPR, shows a trial in Sweden.

[Link](#)

### Drone Game

Drone Simulator is a realistic drone flying game for those who can't afford a real drone or just don't have the time to go out and take a nice fly. You can play this game online and for free on Silvergames.com. Start by purchasing your DJI or Parrot drone and take it to the field. Try to control the aircraft vehicle as good as possible to collect all coins without crashing it against obstacles, such as buildings, trees or rocks.

[Link](#)

### Drone obstacle course

Video of a type of circuit to use as a practice

[Video](#)

### **Drone racing and flying a drone with goggles - First Person View (FPV)**

Flying FPV (First Person View) drones makes use of an onboard camera that relays live video to goggles, mobile phones or tablet screens, while the drone is out of your visual sight.

[Link](#)

### **Drone Safety Guidelines**

Provides safety guidelines for drone pilots.

[Link](#)

### **Drone Simulator**

A virtual environment to practice drone flying.

[Link](#)

### **Drone Simulator II**

Different simulator to practice with drones

[Link](#)

### **Drone Technology**



## ADDITIONAL EDUCATION RESOURCES

Drone technology was one of the most expensive technologies inaccessible for most of the businesses. The advancement of technology has improved the development of drones and have made it much affordable than ever before.

[Link](#)

### **Drone Technology Education (for Kids!)**

Information on where kids can learn drone technology.

[Link](#)

### **Drone technology in agriculture**

Information of the benefits of using drones in agriculture

[Link](#)

### **Drone Technology: Future Trends and Practical Applications**

This book provides a holistic and valuable insight into the revolutionary world of unmanned aerial vehicles (UAV).

[Link](#)

### **Drone Technology: What Is a Drone?**

The term drone usually refers to any unpiloted aircraft. Sometimes referred to as unmanned aerial vehicles (UAVs), these crafts can carry out an impressive range of tasks, ranging from military operations to package delivery. Drones can be as large as an aircraft or as small as the palm of your hand.

[Link](#)

### **DroneBot Workshop**

Tutorials, projects, electronics, microcontrollers, robotics & quadcopters

[Link](#)

### **Drones for Beginners**

Introduces readers to drone basics and applications.

[Link](#)

### **Drones In Education: Integrating UAVS Into STEM**

Highlights the engagement in learning through drones.

[Link](#)

### **Drones in STEM Education**

Full Recording of a Webinar about Drones in STEM Education

[Video](#)

### **Drones in the Classroom: Teaching STEM by Stealth**

## ADDITIONAL EDUCATION RESOURCES

She Maps strives to encourage young people, and especially young women, to engage STEM subjects and to promote non-traditional careers as an option for students. One of the most interesting ways to do this is through indoor drone programs which incorporate new technologies into classroom environments.

[Link](#)

### **Drones in the classroom: The future of STEM Education**

Drone Legends is a curriculum that integrates drone technology, aerial cinematography, and computer science. Kids learn how to connect STEM concepts to everyday life, and engage in transformative, hands-on learning experiences.

[Video](#)

### **Drones in Wildlife Conservation**

Explores how drones aid in wildlife research and conservation.

[Link](#)

### **Drones: The Essential UAV Pilot's Collection: Two books in one, Drones: Mastering Flight Techniques and Drones: How to Make Money**

Drones Mastering Flight Techniques focused on drone flying techniques and getting the best out of your chosen UAV. It is a comprehensive book packed with new ideas, adaptations of old ones, and tactics designed to ensure you capture masterful cinematography. How to Make Money is a book directed solely at how to make money with your drone, starting with the cheapest, fastest, and easiest ways and working out towards longer term but greater yielding projects and careers. It is a book that lays out clear and achievable paths for any prospective or professional UAV Operator, Cinematographer, Cartographer, Conservationist to name but a few.

[Link](#)

## E

### **Educational Drones: The Ultimate Guide For Your School**

Guide for schools on choosing educational drones.

[Link](#)

### **ESPcopter: Programmable Mini Drone**

Tutorial on how to build ESPcopter: modular mini-drone that can be programmed with blocky and Arduino

[Link](#)

### **Exposing Students to STEM Careers through Hands-on Activities with Drones and Robots**

This paper focuses on three robotics related sessions conducted during a three-day summer residential program for high school students offered at Old Dominion University, Norfolk, Virginia during the summer educational program named ODU BLAST. ODU BLAST is part of a Virginia Space Grant Consortium initiative called Building Leaders for Advancing Science and Technology (BLAST), offered at three different universities in the Commonwealth of Virginia.

[Link](#)

### **Eyes on the world – drones change our point of view and our truths**

Drones have changed how we see the world. Even more profoundly, drones have transformed how we witness the world: how we decide the events that matter and create our shared “truth” of what happened.

[Link](#)

## F

### **Flying bird robot can soar so well it uses almost no power**

An autonomous flying robot can float in place like a bird, using its throttle just 0.25 per cent of the time – which could make it useful for surveying a single spot for an extended period of time

[Link](#)

### **Flying Drones with Jaxon: The Beginner's Guide to Learning about Drones**

Embark on an exhilarating adventure in the sky with "Flying Drones with Jaxon," the perfect book for young enthusiasts eager to explore the fascinating world of drones.

[Link](#)

## H

### How drones are solving the problem of marine plastic

Using artificial intelligence to process drone images is allowing researchers to tackle plastic pollution in the ocean in new ways.

[Link](#)

### How Drones Can Improve K-12 Education

At first glance, drones might seem like nothing more than an overpowered toy when it comes to their possibilities with younger children. But give them a deeper look, and they can be a powerful tool for education in disciplines like technology, science, math, and even social studies. K-12 schools across the world are beginning to integrate drones into their curriculums, and they're seeing high returns on investment.

[Link](#)

### How to fly a drone

Familiarization of how to fly a drone

[Link](#)



### Imagining the social future of drones

Despite the opportunities afforded by the growing use of drones, their civilian use causes concern as they can capture, share and store images of events and people following a set of norms still in development.

[Link](#)

### Introducing Air:bit, the micro:bit drone

"Air:bit is a cross curriculumn STEM education drone that combines coding, math and craftsmanship.

Using the easy and flexible makecode platform with micro:bit, students can have an easy access to the technology that make the drone work."

[Video](#)

## L

### Latest Drone News, Uses, Research and Innovation

These daily drone news articles cover the latest innovations, developments, research and regulations from the top UAV bloggers, service providers and manufacturers.

[Link](#)

### Learning with Drones: Flying Windows for Classroom Virtual Field Trips

Virtual field trips (VFT) provide the possibility for students to participate in field trips from remote locations through live conferencing. In this study, we will examine whether drone-based virtual field trips can maintain the advantages of VFT and also address some of their shortcomings in order to become a viable alternative to real field trips.

[Link](#)



## M

### Measurement science and education in the drone times

The usefulness of drones for professional and research activities is justified by the fact that the embedded sensors and data acquisition systems convert drones in flexible and portable measurement instruments. On the other hand, the drone operation introduces sources of uncertainty and accuracy degradation often not taken into account in traditional courses on drones. This paper aims to fulfil this education lack to prepare the next generation of professionals and scientists in the critical use of this new kind of measurement instrument. To reach this goal, in the paper a course on “Measurement for and by drones” to be held at the PhD School in Information Technology for Engineering at University of Sannio - Benevento, Italy, is presented.

[Link](#)

## P

### PX4 Autopilot user Guide

PX4 is the Professional Autopilot. Developed by world-class developers from industry and academia, and supported by an active worldwide community, it powers all kinds of vehicles from racing and cargo drones through to ground vehicles and submersibles.

[Link](#)



## Quiz about drones

What Do You Know About Drones? Trivia Quiz

[Link](#)

## R

### Real Drone Simulator

"Learn to fly various drones risk-free!

We are continuously working to bring you the most realistic experience in both physics and visuals. Next to using the most advanced game development techniques, we are also developing custom tools to provide the most unique and original experiences. The simulator is based on existing drones and parts, including their measured parameters with the support of the manufacturers. We intend to grow by continuously adding more models. The Physics engine of RDS is based on real-life physics formulas, and the software includes a flight behavior pre-calculator simulation system to determine the flight characteristics of even custom-built drones."

[Link](#)

### Responsible Drone Journalism

Responsible Drone Journalism investigates the opportunities and dilemmas of using drones for journalistic purposes in a global perspective. Drawing on a framework of responsible research and innovation (RRI), the book explores responsible drone journalism from multiple perspectives, including new cultures of learning, flying in lower airspace, drone education and concerns about autonomous agents and big data surveillance

[Link](#)

### ROS Tutorials

Tutorial to learn ROS, a library for programming robots in python or C++

[Link](#)

## S

### Science, technology and the future of small autonomous drones

We are witnessing the advent of a new era of robots — drones — that can autonomously fly in natural and man-made environments.

[Link](#)

### Spanish Drone Laws

Everything they have to need to fly a drone in Spain

[Link](#)

### Survey of advances in guidance, navigation, and control of unmanned rotorcraft systems

It describes the state of the art in rotorcraft autonomous UAS (RUAS) and provides a detailed literature review of the past two decades of active RUAS research.

[Link](#)

## T

### **The Drones Come Home**

Unmanned aircraft have proved their prowess against al Qaeda. Now they're poised to take off on the home front. Possible missions: patrolling borders, tracking perps, dusting crops. And maybe watching us all?

[Link](#)

### **The future of drones: What to expect in the next decade**

Drones have transformed human lives for better and for worse. On the one hand, we have very innovative solutions that have been invented through drone technology that have improved the lives of people around the world.

[Link](#)

### **The potential of drone technology in the classroom**

The benefits of introducing drones in education

[Link](#)

### **Tutorial for Paparazzi UAZ**

Paparazzi UAV (Unmanned Aerial Vehicle) is an open-source drone hardware and software project encompassing autopilot systems and ground station software for multicopters/multirotors, fixed-wing, helicopters and hybrid aircraft

[Link](#)

## U

### Use of Drones as Pedagogical Technology in STEM Disciplines

This work aims to analyze the feasibility of using a set of technologies based on drones, designed based on the theory of significant learning through the use of active methodologies. The study was carried out with 30 high school students.

[Link](#)

## W

### **WEBINAR: How to start a successful drone light show business**

A webinar regarding drone light show.

[Video](#)

### **What is a drone and what is it for? Characteristics and functions**

Characteristics and functions of a drone

[Link](#)

### **Why the future is bright for drone technology**

How drones can help us in the future

[Link](#)