Things You Can Do with A Drone



The popularity of non-military drones has skyrocketed in recent years. It is now possible to get your hands on an easy-to-fly drone with an HD camera for less than \$300 and it is only going to get more affordable. One thing is sure, that drones are here to stay, but what can we do with them?

Here is a list of **some things that you can do with a drone**. This might inspire some of you, maybe to start your next business or just to have some fun or to make a positive contribution to the society.

- **1. Take a drone selfie** what could be more satisfying to post on Facebook, than a selfie taken with a drone (a dronefie?).
- **2. Fly with your friends at a park** Get AMA (academy of model aeronautics) insurance for your drone first. Age 19-65 \$75 a year. Register Your Drone with the FAA and label your drone with your registration number. FAA registration costs \$5 per aircraft and is valid for 3 years.
- **3. Race/ challenge your friends** Maybe drone racing will become a popular sport in the future, and then there's always the possibility of having drone wars aka Robot Wars 2.0. The <u>TBS Gemini</u> is one such example of a racing drone.
- **4. Wedding photography** Although commercial use of drones is not yet legal, <u>wedding photography</u> looks to me like a very likely future use for drones and a great money making opportunity.
- **5. Drone Air Show** Much cheaper and safer than the real size Hornets and F-22s, so we might see drones introduced to the Chicago Air and Water show sometime in the future.
- **6. Disaster relief** Imagine using drones to deliver clean water and food to hurricane affected areas both in the developed and developing world. In case of another Hurricane Katrina, the government could call on amateur flyers to help out with the effort.
- **7. Search & Rescue** There is also serious potential here. Drones have <u>already proved themselves</u> <u>useful in search and rescue operations</u>. Even with lower flight times, they are bound to be cost effective over using a helicopter. Drones, equipped with HD cameras could locate people after a Tsunami or after a flood.

- **8. Film live events** <u>Drones filming</u> have already made an appearance at the Sochi Winter Games. Cheaper and safer to film marathons and races from the air compared to a helicopter, and more versatile than a boom truck. There's also going to be less damage if a drone comes down crashing compared to a full sized helicopter.
- **9. Walk your dog** With GPS and pre-programmable flight routes coming as standard nowadays, this could become a serious business opportunity. In a way this would defeat the purpose of dog walking, but if you are pressured for time, why not.
- **10. Temporary cell towers and WiFi** Facebook have already begun working on building WiFi drones for areas where internet access is otherwise limited. Drones could also be used to create temporary cell towers after a disaster or in areas of high cell usage e.g. Times Square on New Year's Eve
- **11. Wildlife monitoring** This could be a cheap way of monitoring animals over a wide area. It would require less staff and be environmentally friendly as well, provided the animals don't mind the quadcopter noise.
- **12. Mail and parcel delivery** Whilst this may be a few years or even a decade away, it certainly looks like drones will be used to deliver parcels in the future
- **13. Journalism** Riots, floods, regional conflicts could all be captured for the evening news from the safety of an office, whilst letting the drone take all the risk.
- **14. Agriculture** Both for monitoring crops in ways never possible before and for drone controlled pesticide, or fertiliser use, in a process known as precision agriculture.
- **15. Aerial mapping** An improvement to Google maps satellite view is perhaps coming up sooner than you think. Drone aerial mapping can also be used in forestry, natural resource management and planning disaster relief. Some companies have started offering this service. You can now also list your own company in our <u>drone hire</u> business directory and advertise your commercial drone service to the world.
- **16. Home helper** Drones could become your next best friend, helping you lift and carry things for you at home or in the garden.
- **17. Take holiday photos** What could be more memorable and middle class than showcasing your holiday photos with a twist; all FPV (first person view) and from above, take by your own little drone.
- **18. Advertising** Ever seen those airplanes dragging around a long banner at high altitude? You will certainly save money and time by advertising on a drone flown banner instead.
- **19. Security** The average 911 response time is about 10 minutes (source). What if the police could get a drone to your house in 1-2 minutes instead. This could reassure you or capture the suspect on camera before he/ she escapes.

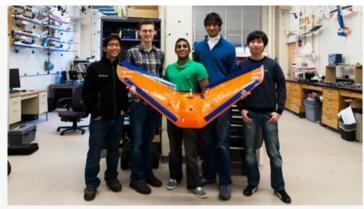
- **20. Deliver your food** Takeaways? A start up in Germany is already trying to deliver your kebab in less than 10 minutes. Domino Pizzas also have their own drone version that can carry up to two large pizzas within a 4 mile radius.
- **21. Transport people** Another German company has developed a **16** propeller <u>Volocopter</u> (VC200) that can fly for up to 20 minutes. Drones could soon be an alternative to jetpacks...
- **22. Film amazing videos** Some of the most breathtaking videos this year were filmed by drones. Whilst this potential was reserved for those who could afford to take a helicopter in the air to capture the shots, it is now possible to capture 1080p videos with a budget less than \$1,000. With a slightly higher budget (about \$1,200 for a DJI Phantom 3 Professional drone), you can now capture drone footage in breathtaking 4K video! If you offer <u>aerial video drone services</u>, then check out our listings page where you can advertise your commercial drone business.
- **23. Help real estate agents** Various companies have already popped up across the US offering aerial photography to real estate agents, again, replacing the need for an expensive helicopter. Check out the drone hire companies that offer <u>aerial real estate photography</u> this service in your area.
- **24. Whale Watching** Drones like the <u>Insitu Integrator</u> are already being used to monitor whales off the coast of Australia.
- **25. Inspect gas/ oil pipelines and oil rigs** BP is the first oil company to have received approval from the FAA to use a drone to monitor its pipeline network in Alaska. As oil rig companies are fined for any kind of oil leaks into the sea, unmanned aerial vehicles could be used to monitor these using infrared cameras. (source)
- **26. Shoot commercials** From cars to trainers, drones have a huge potential and are likely to dominate anything video related in the near future.



This Maserati commercial was shot entirely by a drone

27. Law enforcement – Thermal security cameras can be added to quadcopters and hexacopters, that would help in hostage situations, riots or to search for suspects. Drones may also be used as enforcement in car chases to monitor the situation from above, instead of scrambling a helicopter.

28. Deliver medicines – Teams at Harvard and MIT were funded by The Bill and Melinda Gates Foundation to develop an easy to fly drone that could be used to delivery vaccines and medication to hard to reach places. (source)



A team at Harvard and MIT have been working to build a cheap and effective long range drone for medicine delivery to isolated areas

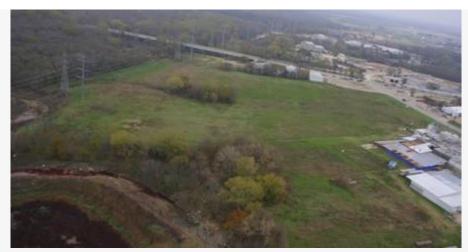
- **29. Track you while exercising** No running partner? Get a drone instead. <u>AirDog</u>, the autonomous flying drone will follow whoever is wearing the special tracker bracelet.
- **30. Inspect roads and bridges** Someone has to inspect the 4 million miles of highways present in the US. Armed with high definition cameras and live video feeds, drones are going to replace manual inspectors in a matter of years whilst keeping them safe (and probably without a job).
- **31. Wildlife research** Endangered species can be difficult to find and study. The Raven A is a drone used by the United States Geological Survey organisation to study the endangered animals such as the sandhill crane and the Sumatran orang-utans. (<u>source</u>)



Drones can be used to track endangered species such as the Sumatran Orangutan

- 32. **Atmospheric research** NASA is working on an UAV that they can launch into the ozone layer to better understand how it works. (source)
- **33. Examine rooftop damages** You can't make inspections any safer following storm damage than by using a flying multicopter to take all the pictures for you.

- **34. Watch your son playing sport from home** You could use your drone as your personal live TV camera. Simply hover it over the pitch to get a bird's eye view and watch your son play from the comfort of your own home.
- **35. Wildfire monitoring** A network of drone equipped with infra red cameras can be used to form a live map of where the fire hotspots are and use it to most efficiently deploy resources. They may also be used for detecting fires in early stages when they could be more easily extinguished.
- **36. Environmental Compliance** A drone was used to discover that a meat packing plant was draining blood straight into a river. The authorities in Texas were alerted immediately and they took action straight away.



A drone flying over a meatpacking plant noticed blood draining into the nearby river

- **37. 3D Mapping** I know I've mentioned mapping already, but not 3D mapping. Pix4D introduced the concept at a TED talk last year. The software creates 3D maps from drone aerial photos.
- **38. Chase tornadoes** The Tempest is a UAV that can get reasonably close to a tornado. It is equipped with air pressure, moisture, temperature, and wind speed sensors. The Tempest was able to fly for 44 minutes in a supercell thunderstorm last year, transmitting priceless information to researchers on the ground. (source)



The Tempest drone has been used to collect storm and tornado data

- **39. Save Lives** A medical student in Australia made a demonstration of a drone delivering a defibrillator in the field after dialling for emergency. At the same time, the drone could provide 2 way communication for giving instructions and could even sport an LED screen showing how to perform the manoeuvres.
- **40. Virtual tours** Drones with 360 degree cameras that you can control by yourself in any part of the world allow you to get visually immersed without actually having to travel there. Imagine instantly traveling to Hawaii or The Caribbean.
- **41. Entertain** Finally, let's not forget what is probably the most common use nowadays. Drone hobbyists love flying them for the entertainment factor and for uploading cool videos and photos on to Facebook and Instagram.
- **42.** The best use is using a quadcopter to hang an antenna line in a tall tree.

