



# PROGRAM A DRONE USING PYTHON\*

Block coding with Scratch\* is a start, but many professional programmers use text-based languages like Python. Python will level up your programming skills and enable a new set of opportunities with Tello, including capturing video, establishing your own flight commands, and much more.

## GET READY: SET UP THE PYTHON PROGRAMMING ENVIRONMENT

1. Install Python 3.7 on your Windows\* device.
  - a. Open the Windows Store\*.
  - b. Search for Python 3.7.
  - c. Select Install.
2. Load the easyTello Python library.
  - a. Open command prompt.
  - b. Type `python3 -m pip install --upgrade easytello --user`
  - c. You will see the easytello library install.
3. Connect your drone to your device.
  - a. Turn on your drone and wait for it to cycle through its startup checks.
  - b. Connect your device to the Tello-XXXXXX WiFi network.
4. Create a drone object in Python and get ready to program.
  - a. Open the Python 3.7 application.
  - b. Type `from easytello import tello`
  - c. Type `my_drone = tello.Tello()`
  - d. When your drone starts blinking a green light, it is ready to fly.



Scan this QR code  
to view the software  
requirements.

## ACTIVITY CARD 7





## TRY IT: FLY YOUR DRONE WITH PYTHON

1. Type `my_drone.takeoff()`.
2. Type `my_drone.flip("f")`.
3. Type `my_drone.land()`.
4. What did your drone do when you executed each command? What do you want to make it do next?
5. Leave the Python coding environment by typing `exit()`.

Tip: Type `help(my_drone)` to see the full list of Python commands in the easyTello Library.

*Pattern recognition is the process of finding and using common characteristics to solve problems. Each line of code uses "my\_drone". Where is the name of your drone defined and how would you change it?*



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## GO FURTHER

Getting the hang of programming in Python? Try one of the following challenges.

Turn on the video stream	Execute an emergency landing	Create a flight path program
Turn on the video stream and capture video as Tello flies around your space. Then find and review the video footage.	Check your drone's battery. Then program Tello to land if the battery gets too low. Hint: you may need to research if controls in Python.	So far, you've been flying your Tello in real time. Use Visual Studio Code* to write a complete program then execute the entire program at one time. Can you make Tello fly to each corner of your room?

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