

00_crazyflie_sim_teacher__

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Part of the InnovatED STEM and DroneBlocks Land, Air, and Sea Robotics Curriculum
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1 Crazyflie Demo in Jupyter Notebook

This notebook allows you to test the **Crazyflie Simulator** and run real drone flight sequences. `##`
Instructions: 1. Set `USE_REAL_CRAZYFLIE = False` to run the **simulator only** (no real flight). 2.
Set `USE_REAL_CRAZYFLIE = True` to fly a **real Crazyflie drone**. 3. Run each cell step by step
for **better control** over execution.

```
[ ]: # Import necessary modules
import time
from crazyflie_sim import CrazyflieSimulator # Ensure this file is in the same_
↳directory or accessible
```

```
[ ]: # Set mode: False for simulation, True for real Crazyflie
USE_REAL_CRAZYFLIE = False # Change to True to fly the real drone

# Initialize Crazyflie Simulator (or real Crazyflie)
drone = CrazyflieSimulator(real=USE_REAL_CRAZYFLIE)
print("\n Crazyflie Demo Initialized")
```

```
[ ]: # Takeoff
drone.takeoff()
time.sleep(2) # Wait for takeoff
```

```
[ ]: # Move Forward
drone.forward(1.0) # Move forward 1 meter
time.sleep(2)
```

```
[ ]: # Move Right
drone.right(0.5) # Move right 0.5 meters
time.sleep(2)
```

```
[ ]: # Ascend
drone.up(0.3) # Move up 0.3 meters
```

```
time.sleep(2)
```

```
[ ]: # Rotate 90 Degrees  
drone.rotate(90, 1.0) # Rotate 90 degrees  
time.sleep(2)
```

```
[ ]: # Move Backward  
drone.backward(1.0) # Move backward 1 meter  
time.sleep(2)
```

```
[ ]: # Move Left  
drone.left(0.5) # Move left 0.5 meters  
time.sleep(2)
```

```
[ ]: # Descend  
drone.down(0.3) # Move down 0.3 meters  
time.sleep(2)
```

```
[ ]: # Land  
drone.land()  
print("\n Crazyflie Demo Complete!")
```