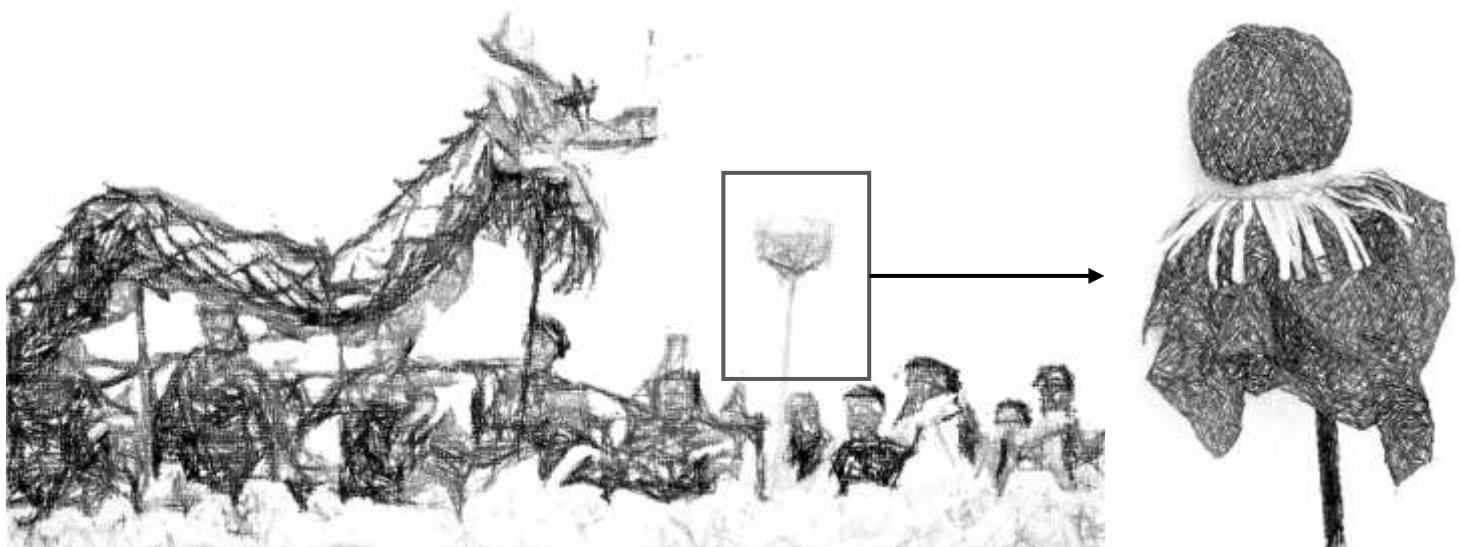


Chinese Dragon Ball Stick

— Alternative Motion Controller for *DF Pong*



The Dragon Ball Stick is an alternative motion-based controller designed for the game *DF Pong*.

Inspired by the **rhythmic movements of traditional Chinese dragon-dancing**, the device adopts the form of the leading “dragon ball stick”. An Arduino Nano 33 IoT, built-in **IMU**, and BLE wireless communication module are embedded inside the staff, allowing physical gestures to be translated into digital input.

Instead of pressing buttons, players control the game by tilting the staff—mirroring iconic dragon-dance motions:

Neutral position — paddle stays still

Tilt left — paddle moves upward

Tilt right — paddle moves downward

This project explores the connection between bodily expression and digital feedback, making gameplay more performative and culturally expressive.

Before Start-Up

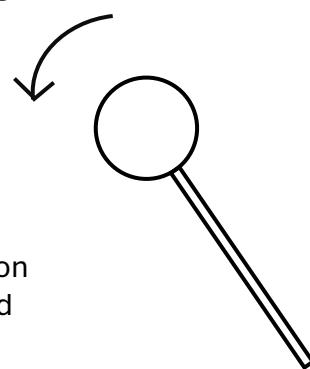
Power the controller using a power bank or USB power source (connector located beneath the red cloth).

Hold the staff upright for approximately **3 seconds** to allow automatic calibration.

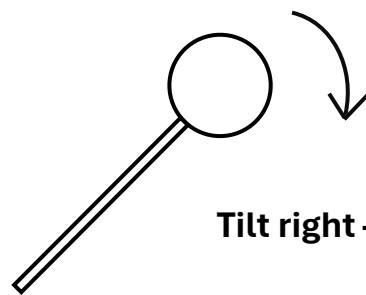
Once calibration is complete, the controller becomes active. A short beep indicates successful motion capture.



Neutral position — still



Tilt left — up



Tilt right — down