Dynamic LED Brightness Control with Raspberry Pi Pico

Code:

from machine import Pin, PWM

import utime

# Initialize PWM on GPIO pin 15

led = PWM(Pin(15))

# Set the PWM frequency

led.freq(1000)

def set\_brightness(duty\_cycle):

# Set the duty cycle (0 to 65535)

led.duty\_u16(duty\_cycle)

# Main loop to vary brightness

while True:

for i in range(0, 65536, 256):

set\_brightness(i)

utime.sleep(0.01)

for i in range(65535, -1, -256):

set\_brightness(i)

utime.sleep(0.01)

result:



