

ME: The Tkinter interface looks too simple. Can you add more features like colors, an on/off indicator, better styling, etc? I want my interface to look more professional.

CHATGPT:

Yes — Tkinter can look a lot better with some simple styling. By default it's very "Windows 95," but you can improve it a lot using:

- bigger window size
- custom colors (dark theme looks good for Fab demos)
- better button styling
- spacing/padding
- font upgrades

Here's a cleaner, more modern-looking version of your interface:

```
import serial
import tkinter as tk

ser = serial.Serial('COM8', 115200)

def motor_on():
    ser.write(b'ON\n')
    status_label.config(text="Motor: ON", fg="#00ff88")

def motor_off():
    ser.write(b'OFF\n')
    status_label.config(text="Motor: OFF", fg="#ff3355")

# --- Main Window ---
root = tk.Tk()
root.title("XIAO RP2040 Motor Control")
root.geometry("400x300")
root.configure(bg="#1e1e2e")

# --- Title ---
title = tk.Label(
    root,
    text="Motor Control Interface",
    font=("Arial", 18, "bold"),
    bg="#1e1e2e",
    fg="white"
```

```

)
title.pack(pady=20)

# --- Status ---
status_label = tk.Label(
    root,
    text="Motor: OFF",
    font=("Arial", 14),
    bg="#1e1e2e",
    fg="#aaaaaa"
)
status_label.pack(pady=10)

# --- Button Frame ---
frame = tk.Frame(root, bg="#1e1e2e")
frame.pack(pady=30)

btn_on = tk.Button(
    frame,
    text="TURN ON",
    command=motor_on,
    font=("Arial", 12, "bold"),
    bg="#00aa55",
    fg="white",
    activebackground="#00cc66",
    activeforeground="white",
    width=12,
    height=2,
    relief="flat"
)
btn_on.grid(row=0, column=0, padx=15)

btn_off = tk.Button(
    frame,
    text="TURN OFF",
    command=motor_off,
    font=("Arial", 12, "bold"),
    bg="#aa0033",
    fg="white",
    activebackground="#cc0044",

```

```
    activeforeground="white",
    width=12,
    height=2,
    relief="flat"
)
btn_off.grid(row=0, column=1, padx=15)

root.mainloop()
```

What changed (for your documentation)

You can describe this improvement like:

- Added dark UI theme for better visual contrast
- Increased window size for usability
- Improved typography (larger bold labels)
- Added status indicator feedback
- Styled buttons with color coding:
 - Green = ON
 - Red = OFF
- Improved layout using frames and spacing
- Removed default Tkinter “boxed” look using flat buttons