

PinkyPi Keyboard

Ergonomische Tastatur
Lukas Krämer
SoSe 2024

WARUM?



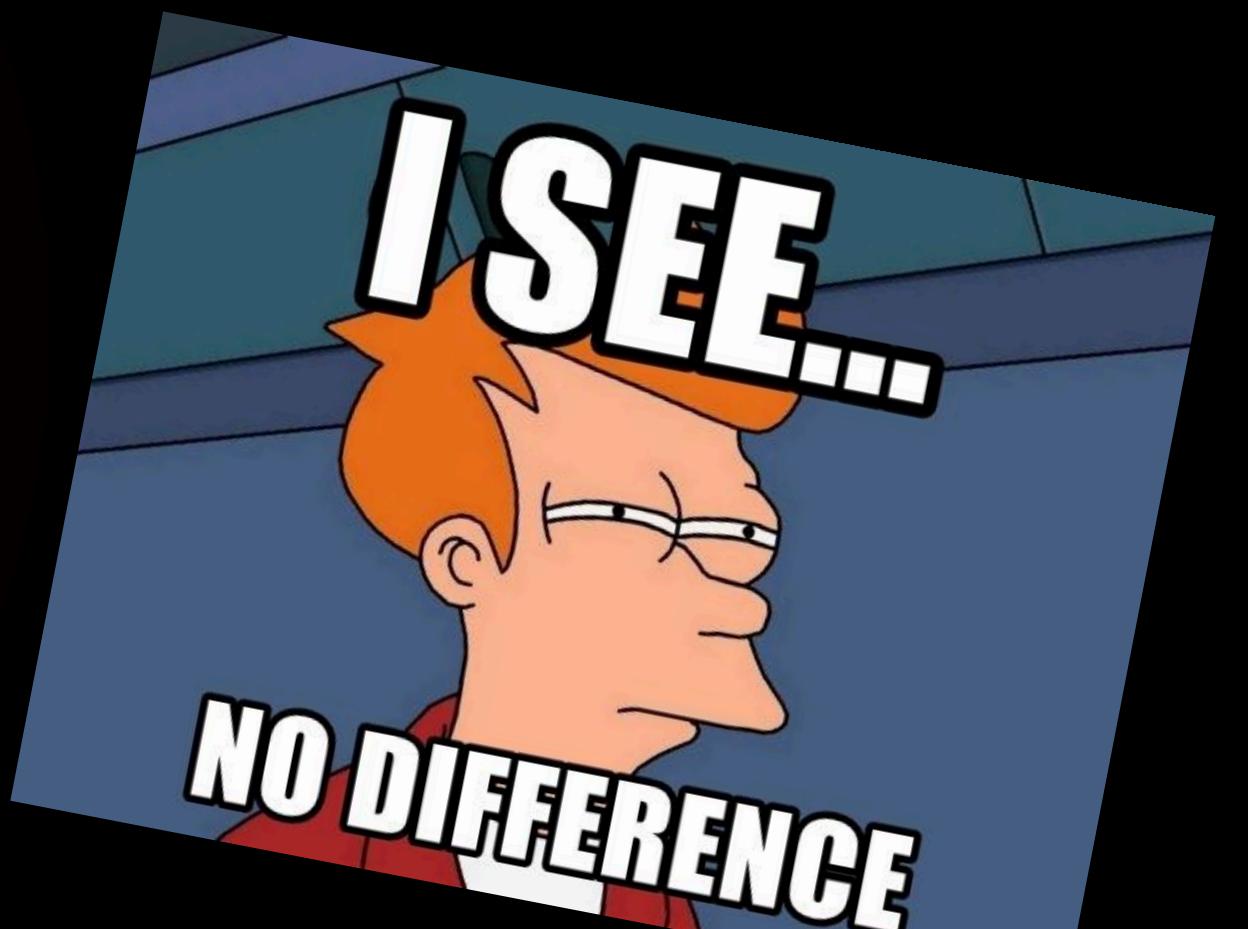
Schreibmaschine Continental
ca. 1924



PC Pool Tastatur
FH Wedel, 2024



Schreibmaschine Continental
ca. 1924



PC Pool Tastatur
FH Wedel, 2024

WARUM?

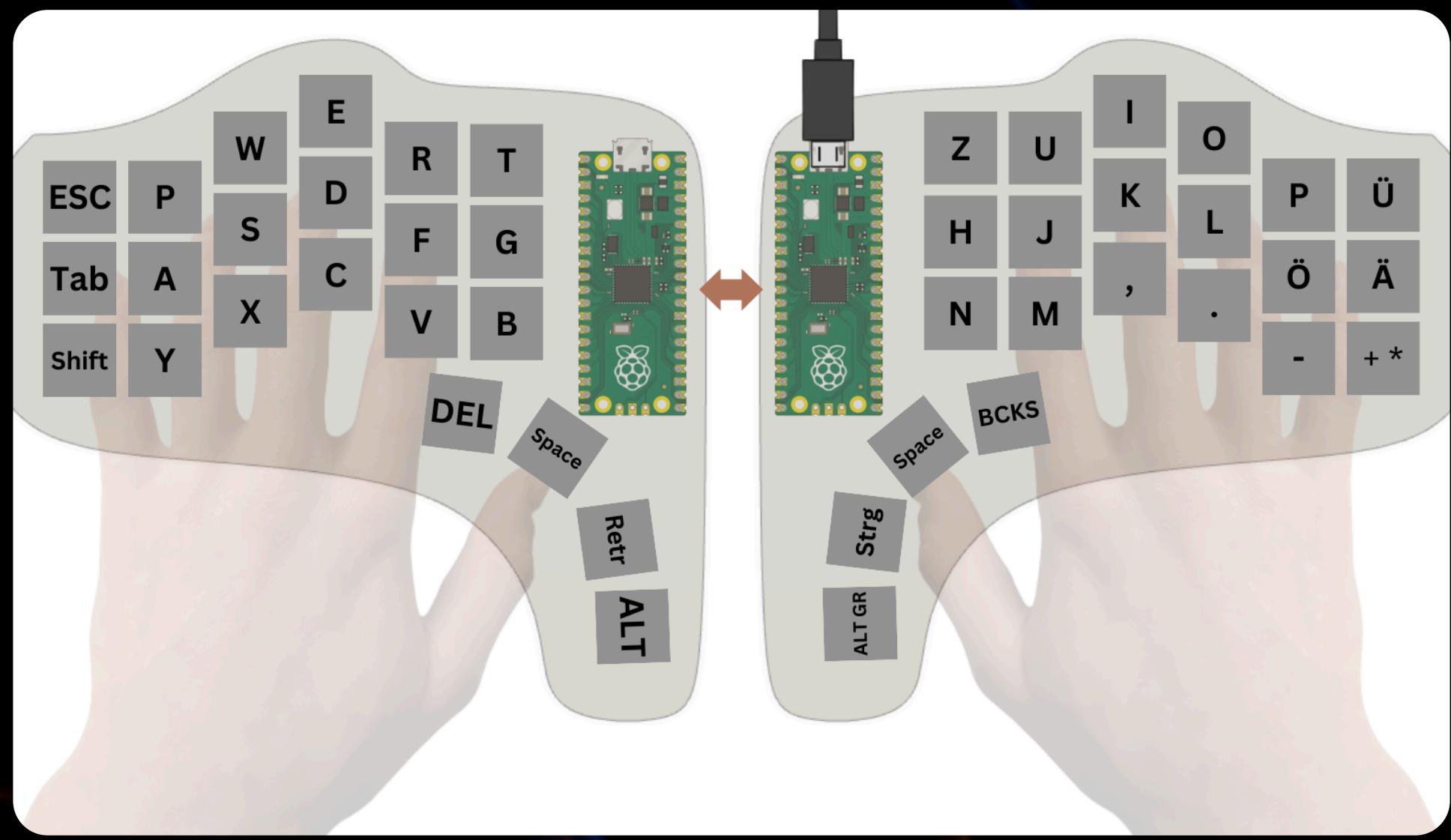


Elektronik, Programmieren, Bauen

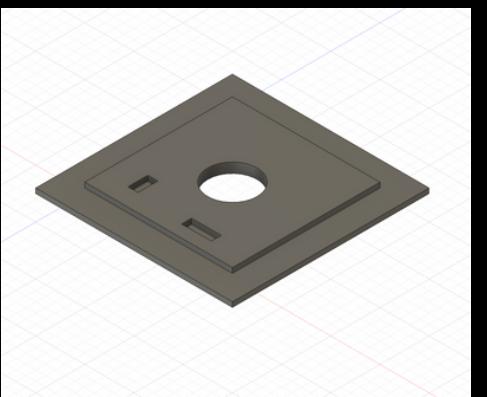
Hardware

Die Idee

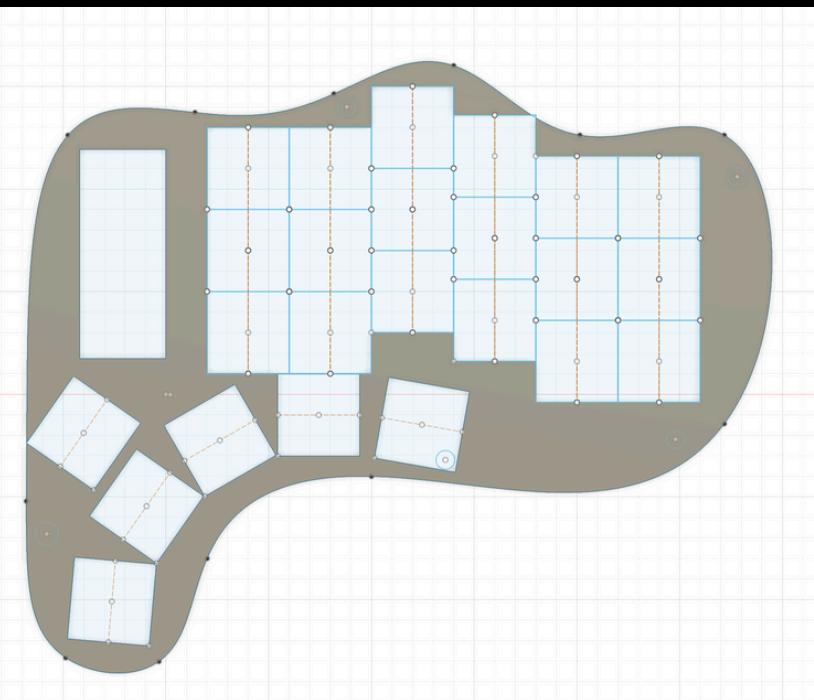
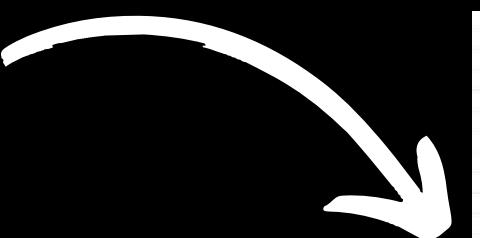
zumindest theoretisch...



Umsetzung



Einzelner
Schalter

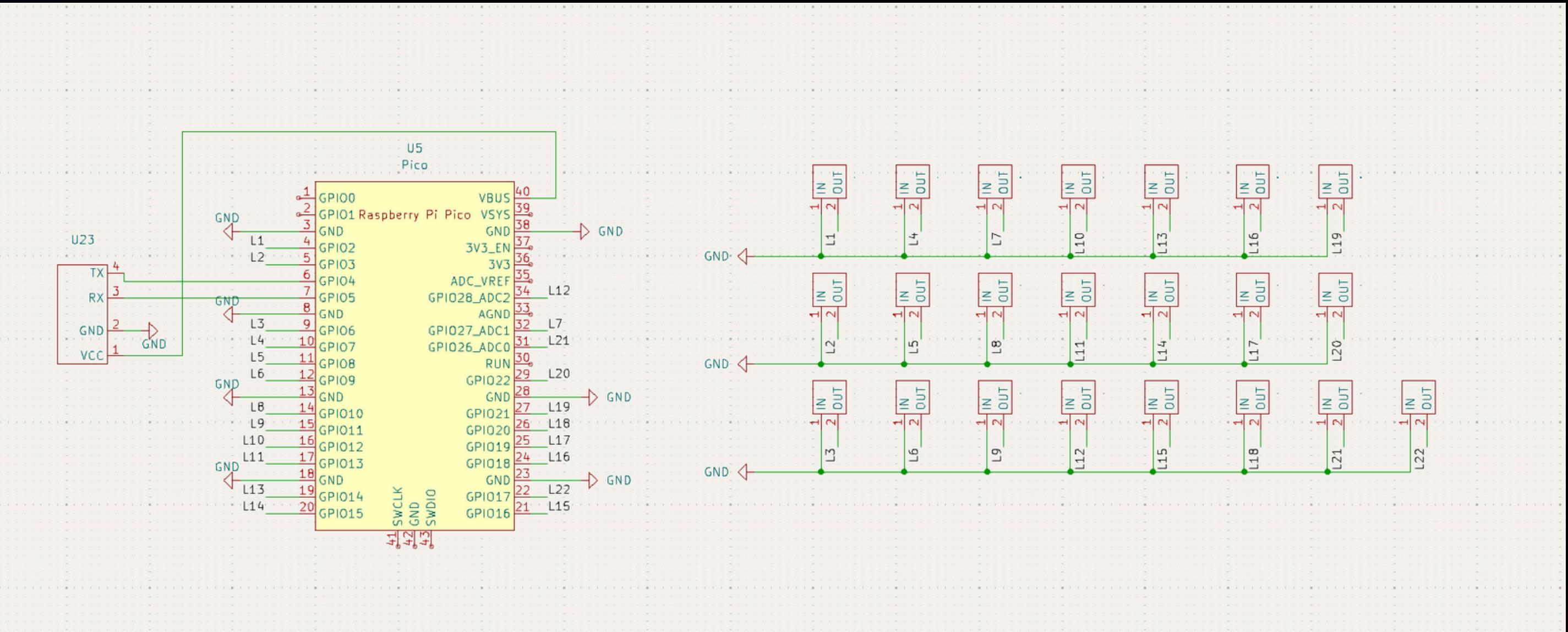


Layout Test



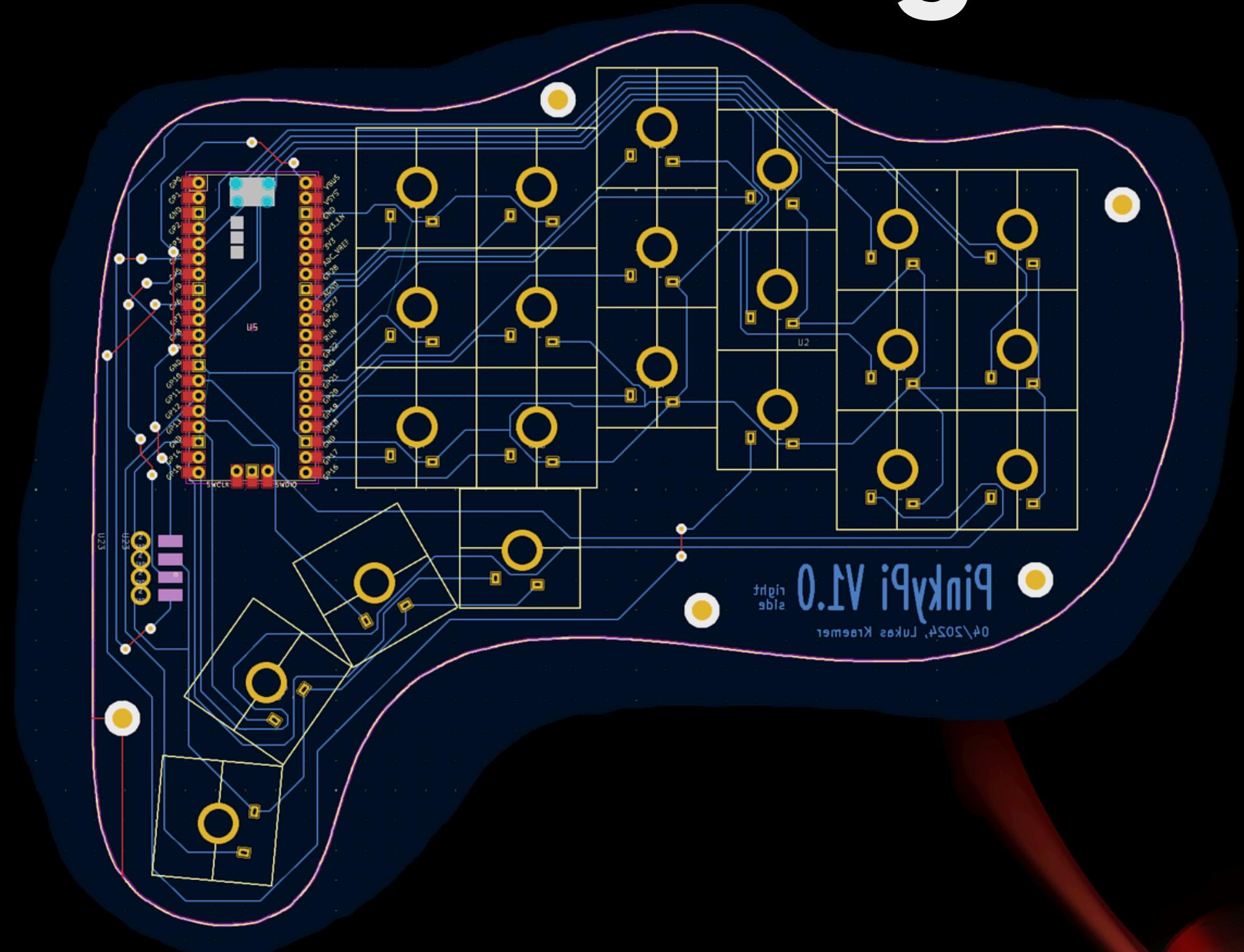
“Echter” Test

Umsetzung



Schaltplan rechte Seite

Umsetzung



PCB rechte Seite

Umsetzung

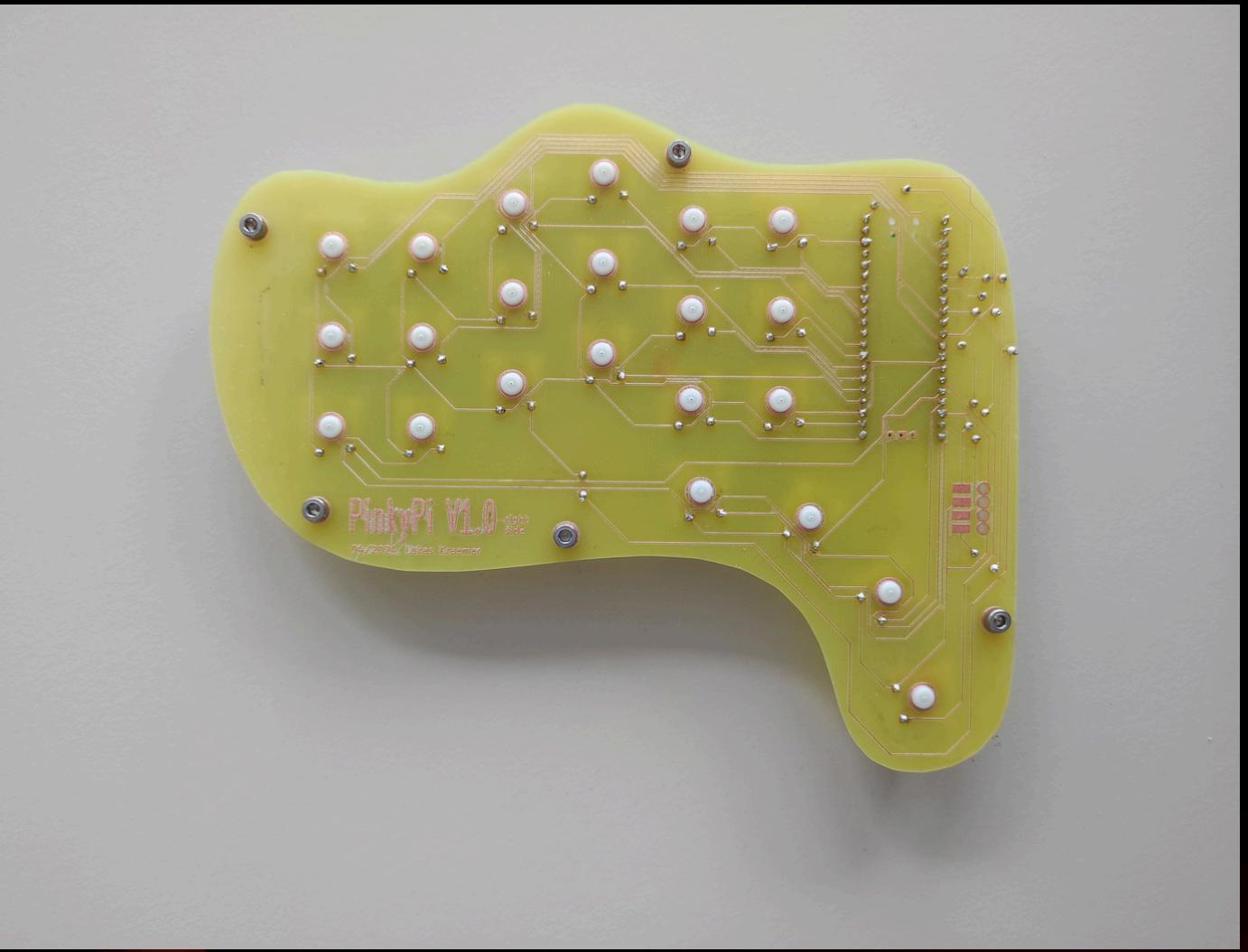


Kontrollansicht

Umsetzung



Bestücktes PCB
Oberseite



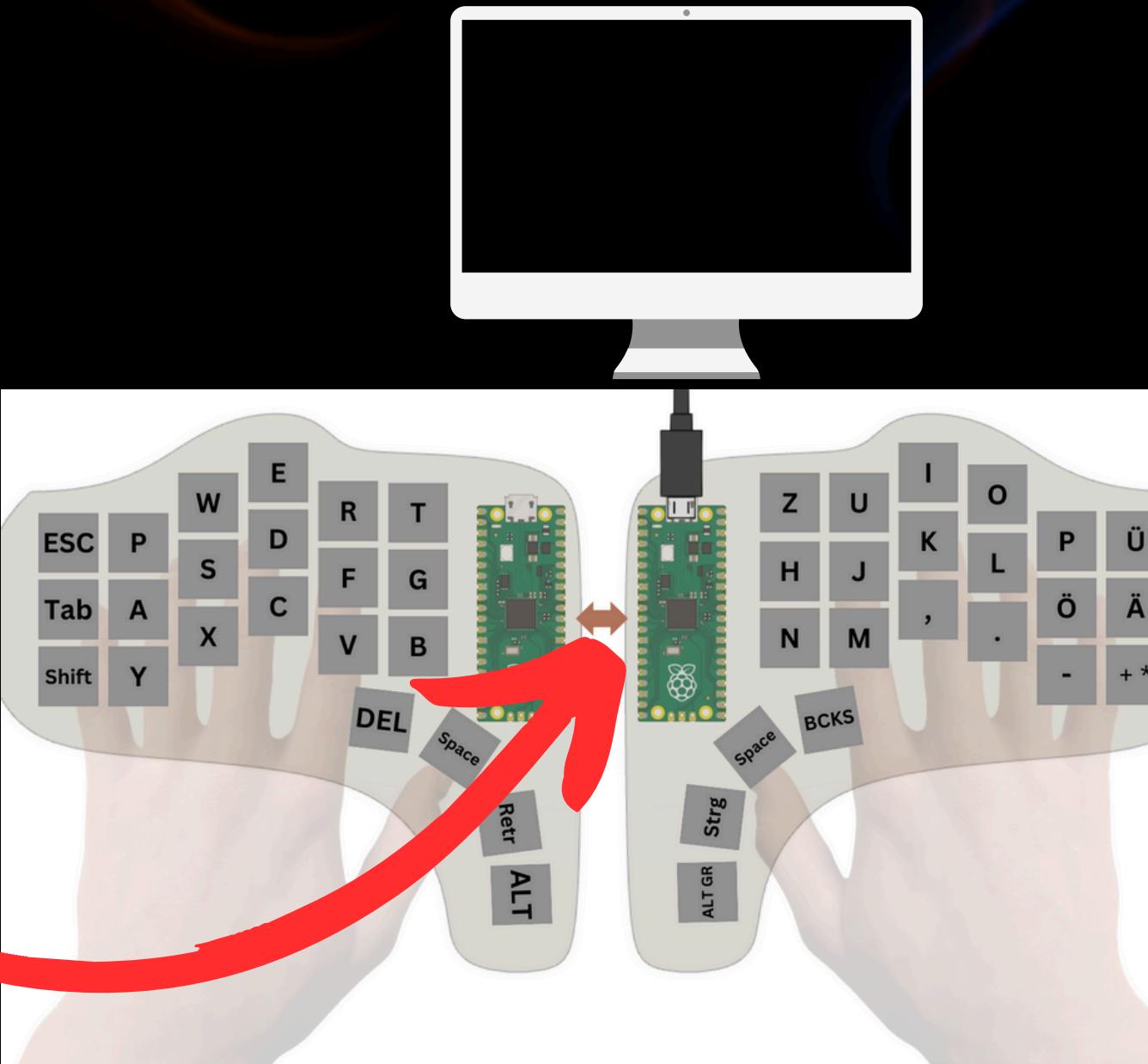
Bestücktes PCB
Unterseite

Software

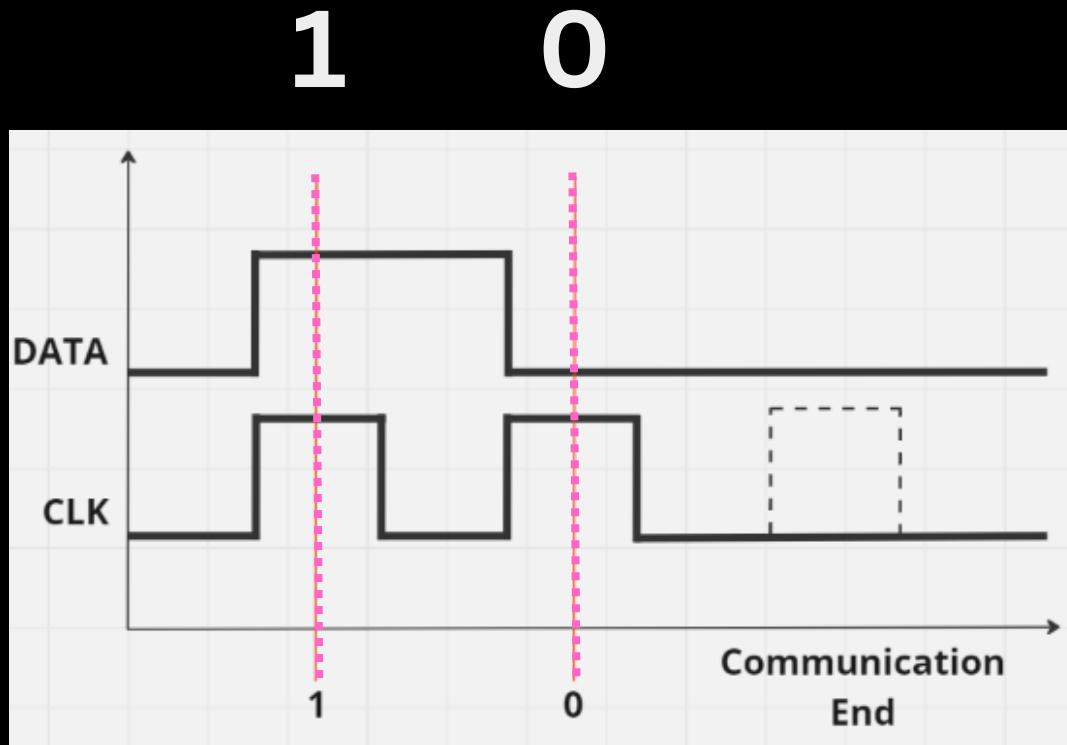
Die Idee

zumindest theoretisch...

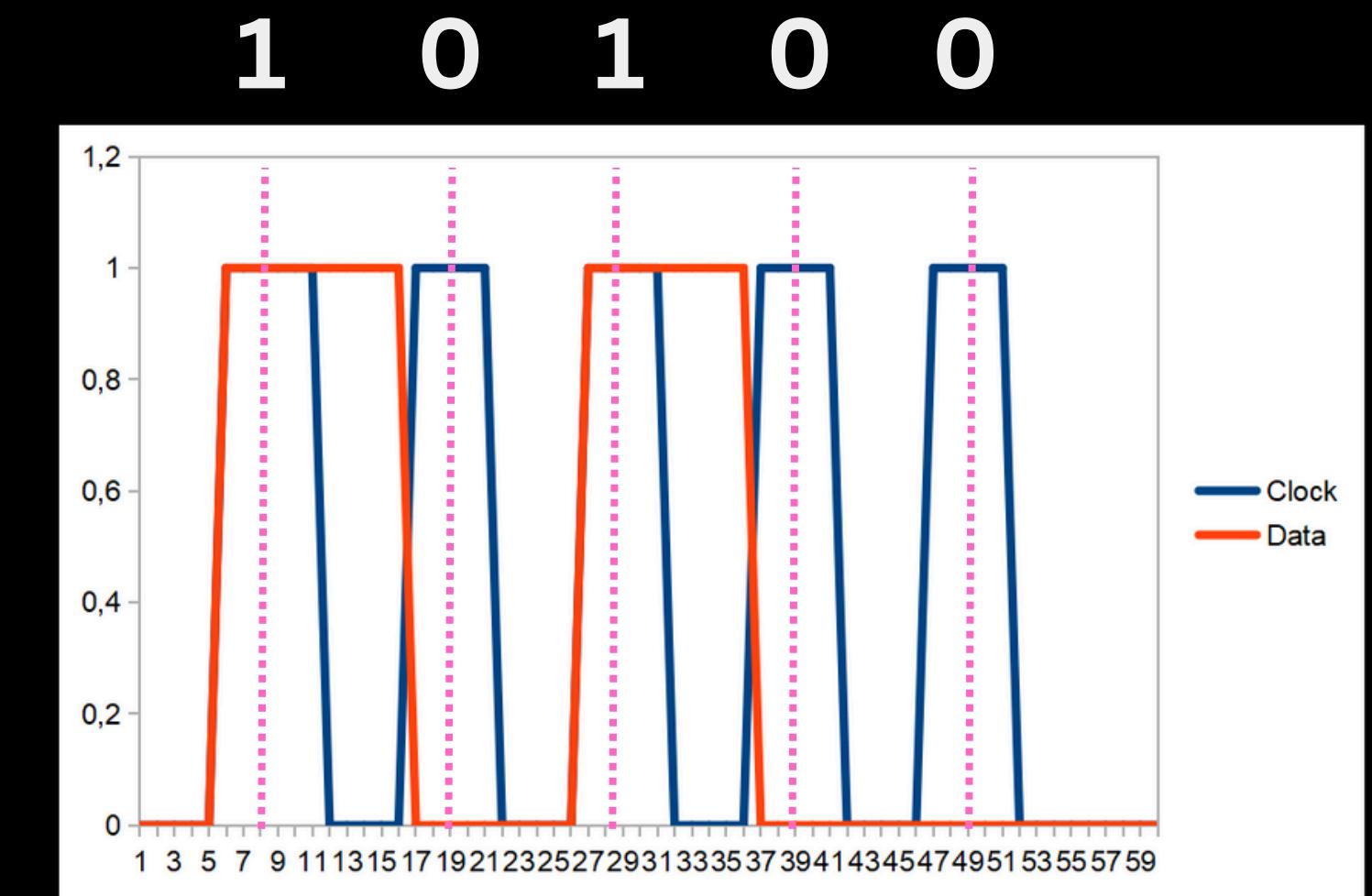
I2C!



```
pin_mapping = {  
    14: "A",  
    21: "B",  
    ...  
}  
  
while True:  
    # loop through all pins  
    # emulate key if switch held down  
    for pin in pins:  
        if pin == HIGH:  
            keyboard.send(pin_mapping[pin])  
  
        # if clock is high, receive data  
        # emulate key based on received data  
        if clock == HIGH:  
            key = receive_data()  
            keyboard.send(key)
```



Theorie



Praxis

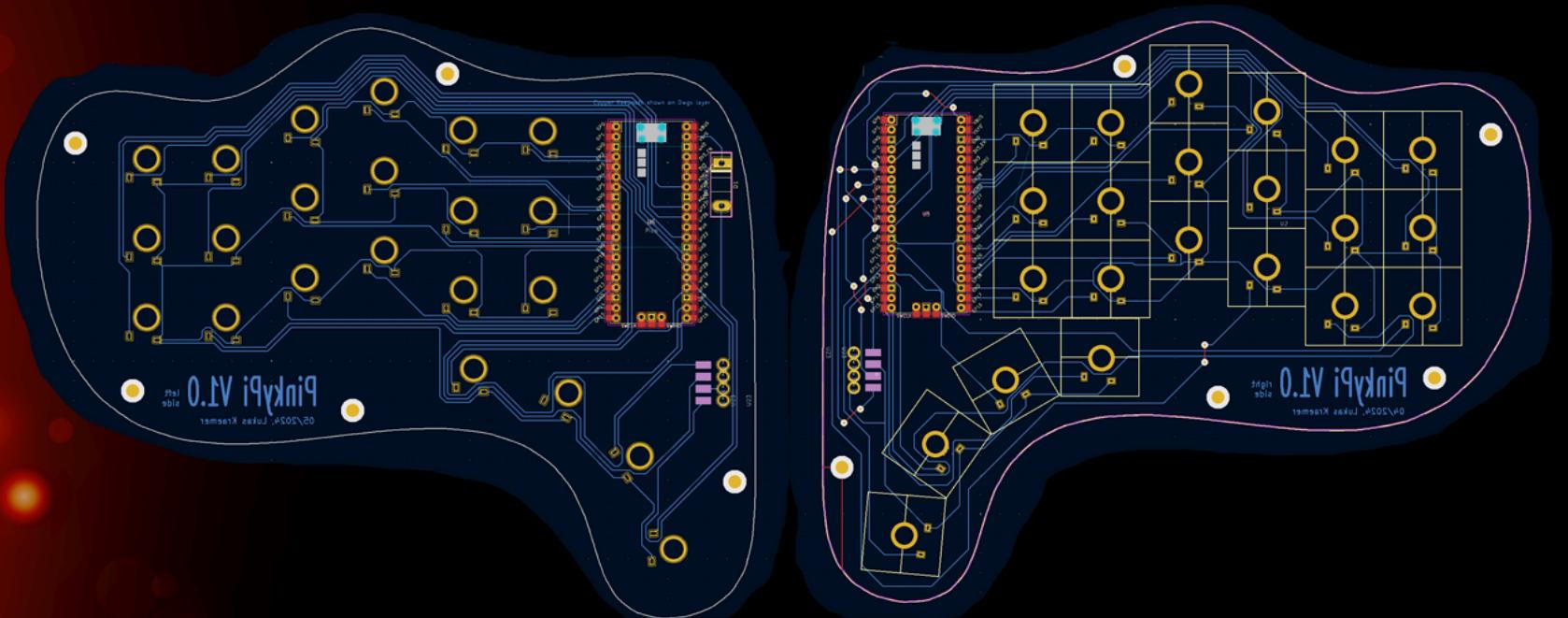


Aktueller Projektstand

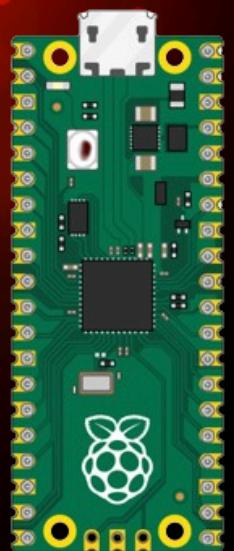
Learnings

Fehler sind die besten Lehrer

Geplant:

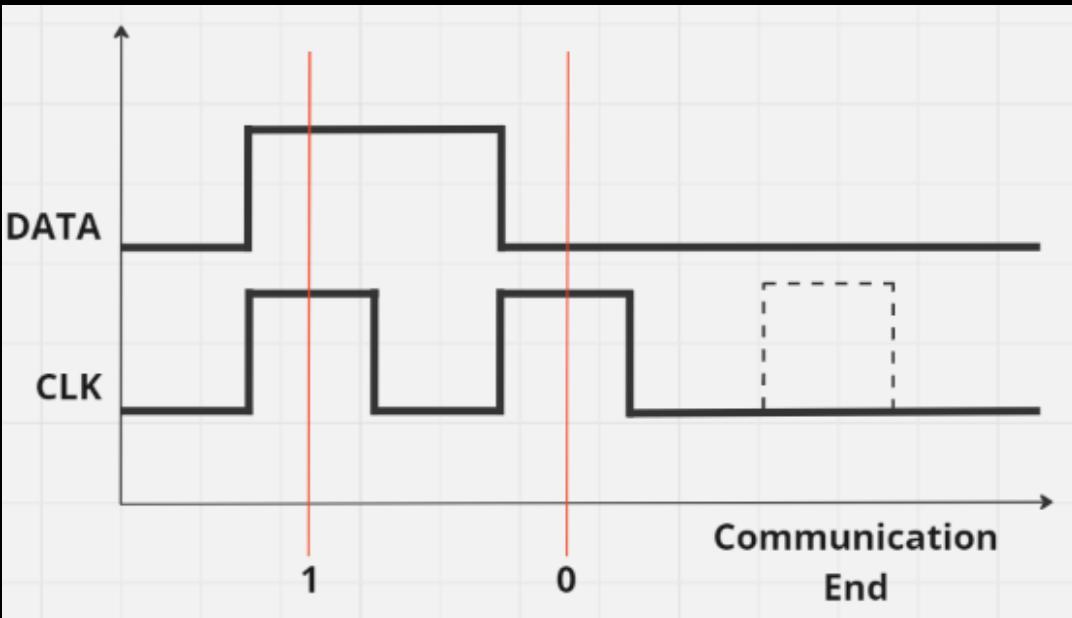


KiCad



Pi Pico

Ungeplant:



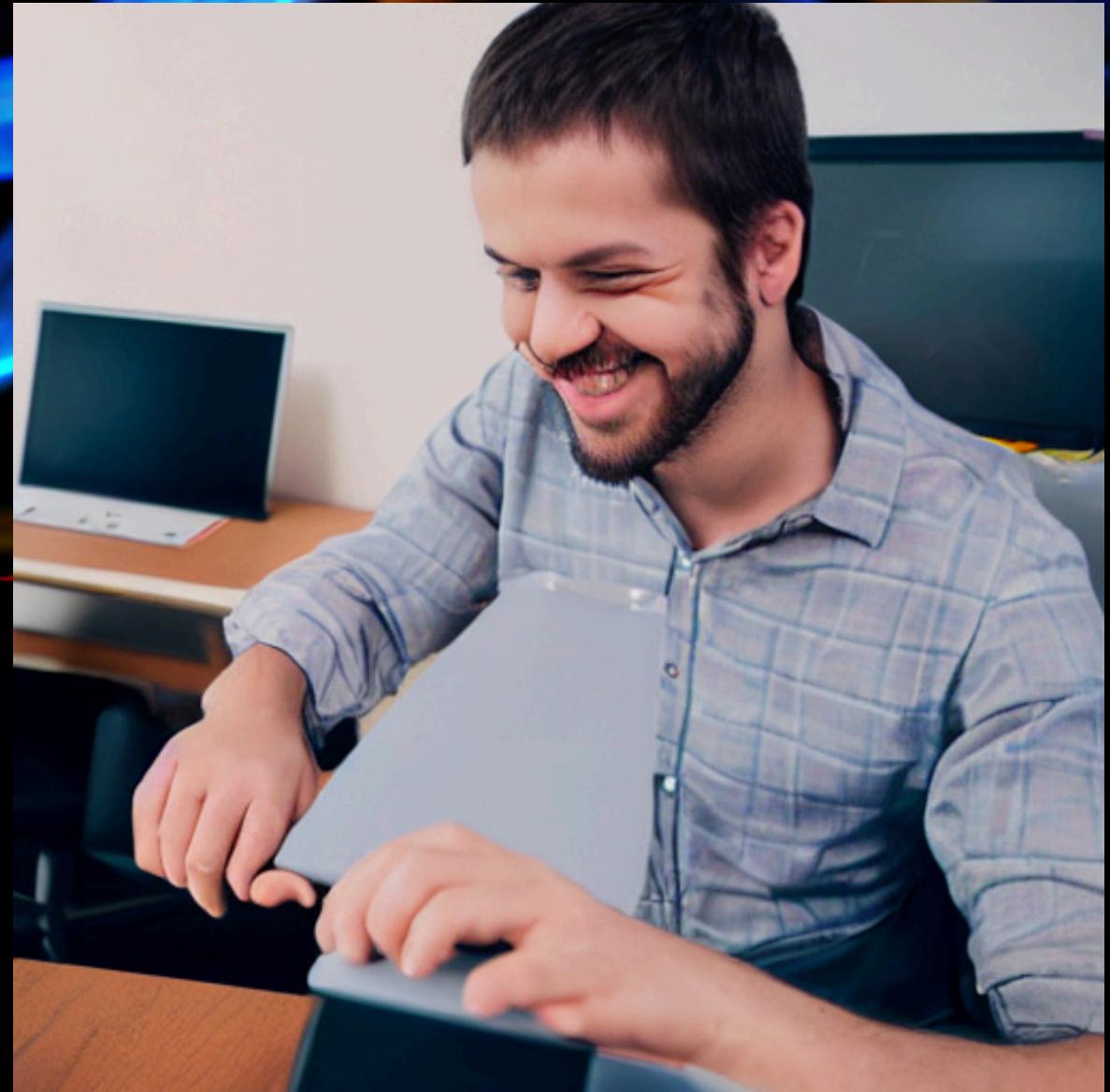
Protokoll



MicroPython



CircuitPython



“Create an image of a software developer that is super happy because he can use an ergonomic keyboard”