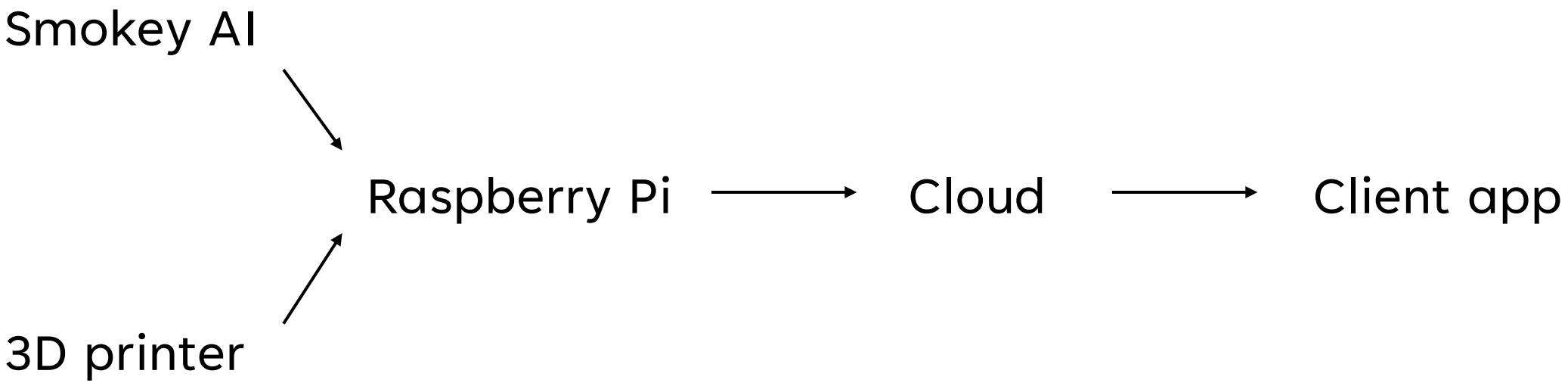
Cloud Print

How does it work ?



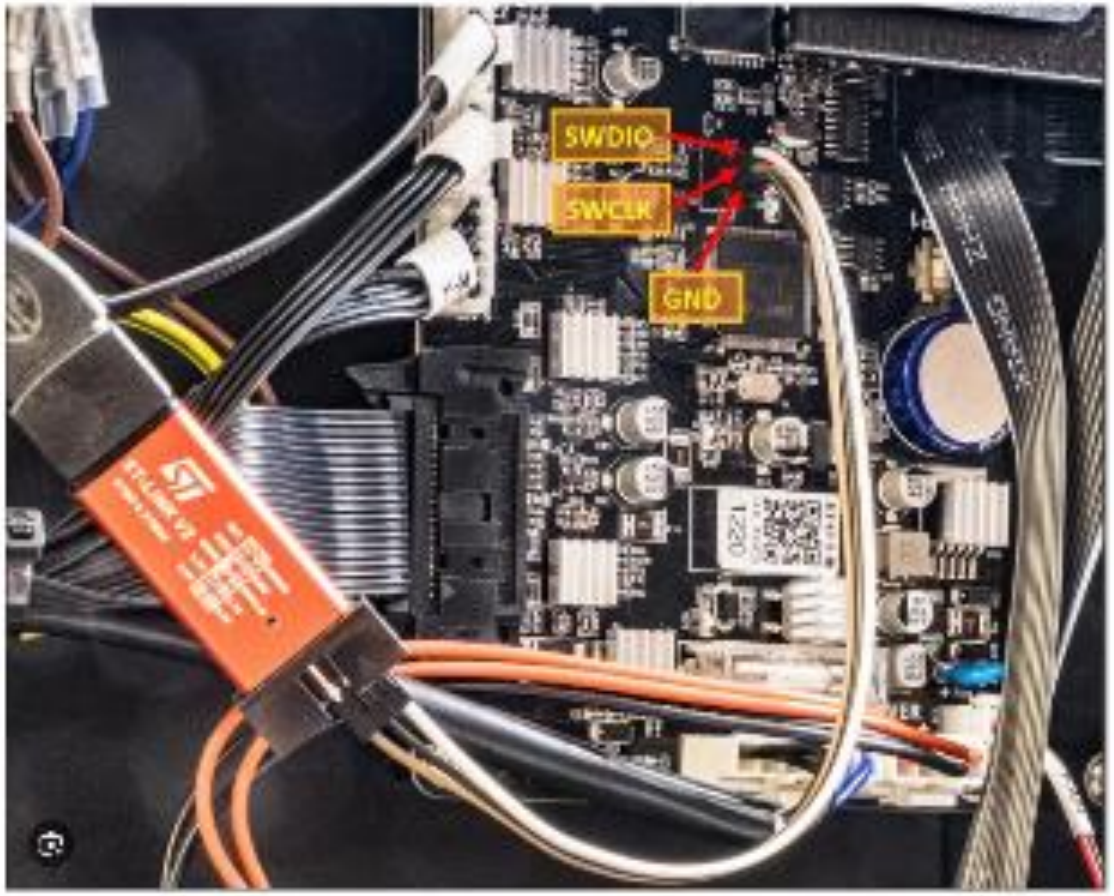
First connection

- Klipper
- Bin file
- Hex file

USB

- Klipper
- Moonraker

ST-Link USB and App



View 'mcu' documentation
```
[mcu]
serial: /dev/serial/by-id/usb-1a86_USB2.0-Serial-if00-port0
# in some cases, the serial port is detected with a slightly different name:
# serial: /dev/serial/by-id/usb-1a86_USB_Serial-if00-port0
baud: 115200
restart_method: command
```

View 'board_pins' documentation
```
[board_pins]
aliases:
    P1_1=PD7,  P1_3=PB2,  P1_5=PE4, P1_7=PB1, P1_9=<GND>,
    P1_2=PD5,  P1_4=PE5,  P1_6=PB0, P1_8=PD4, P1_10=<3V3>,
    P2_1=PE6,  P2_3=PD15, P2_5=PD1, P2_7=PE8, P2_9=PE10,
    P2_2=PD13, P2_4=PD14, P2_6=PD0, P2_8=PE7, P2_10=PE9
```

View 'printer' documentation
```
[printer]
kinematics: cartesian
max_velocity: 500
max_z_velocity: 12
max_z_accel: 50


# stick-on plastic sheet bed
max_accel: 2900
# glass bed
# max_accel: 1900
```

View 'stepper' documentation
```
[stepper_x]
step_pin: PB6
dir_pin: !PB5
enable_pin: !PB7
microsteps: 16
rotation_distance: 40

endstop_pin: ^!PC13
position_endstop: -4

position_min: -4
position_max: 230

homing_speed: 70
```

View 'stepper' documentation
```
[stepper_y]
step_pin: PB3
dir_pin: PD6
enable_pin: !PB4
microsteps: 16
rotation_distance: 40
```

View 'stepper' documentation
```
[stepper_z]
step_pin: PA12
dir_pin: !PA11
enable_pin: !PA15
microsteps: 16
rotation_distance: 8

endstop_pin: probe:z_virtual_endstop

position_min: -3
position_max: 250

homing_speed: 5
second_homing_speed: 5
```

View 'extruder' documentation
```
[extruder]
step_pin: PB9
dir_pin: PB8
enable_pin: !PE0
microsteps: 16
full_steps_per_rotation: 200
rotation_distance: 33.683

heater_pin: PA0
sensor_pin:  PA1
sensor_type: EPCOS 100K B57560G104F
min_temp: 0
max_temp: 255

nozzle_diameter: 0.400
filament_diameter: 1.750
max_extrude_cross_section: 5

pressure_advance: 0.552
```

View 'input_shaper' documentation
```
[input_shaper]
shaper_type_x: mzv
shaper_freq_x: 94.0
# stick-on plastic sheet
shaper_type_y: 3hump_ei
shaper_freq_y: 62.6
# glass bed
#shaper_type_y: 3hump_ei
#shaper_freq_y: 52.0
```

View 'mcu' documentation
```
[mcu]
serial: /dev/serial/by-id/usb-1a86_USB2.0-Serial-if00-port0
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restart_method: command
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    P2_1=PE6,  P2_3=PD15, P2_5=PD1, P2_7=PE8, P2_9=PE10,
    P2_2=PD13, P2_4=PD14, P2_6=PD0, P2_8=PE7, P2_10=PE9
```
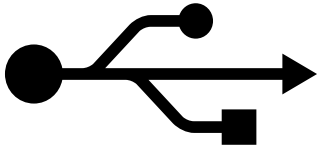
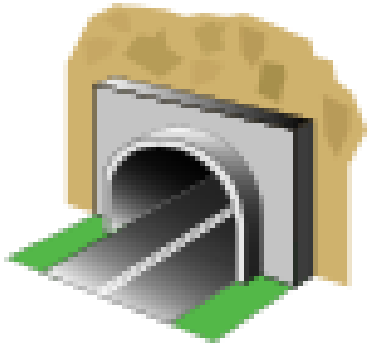

View 'printer' documentation
```
[printer]
kinematics: cartesian
max_velocity: 500
max_z_velocity: 12
max_z_accel: 50


# stick-on plastic sheet bed
max_accel: 2900
# glass bed
# max_accel: 1900
```

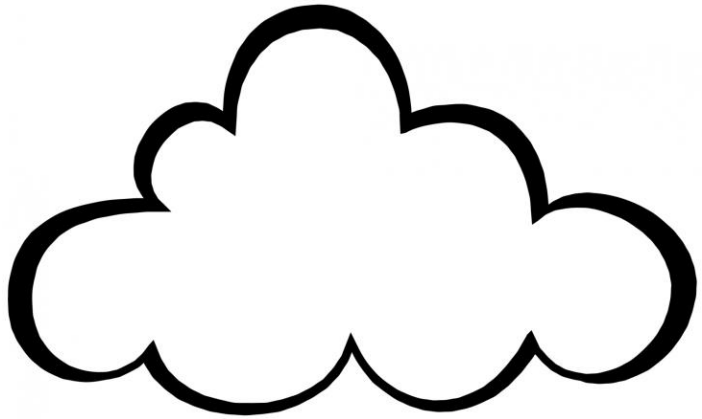
Printer Config writing in markup-sh language

Local Moonraker API



Secund connection





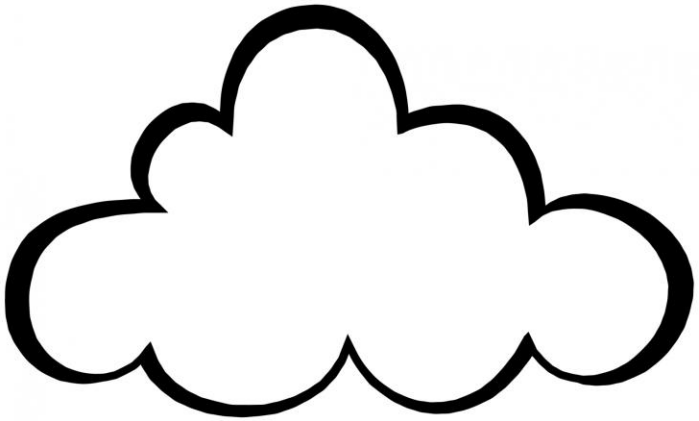
Cloudflare tunnel

- Total cost (7 sek) for .se domain
- Free SSL certificate
- Super easy to setup

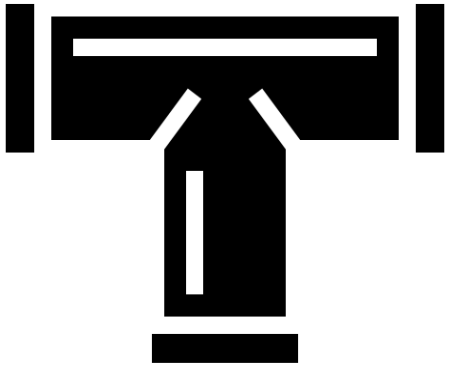
Smokey AI

- Ollama LLM
- Mistral 7B model by Mistral AI
- Model file for custom model
- Python server (Cross-Origin Resource Sharing)
- Via same tunnel to .se domain

Third connection

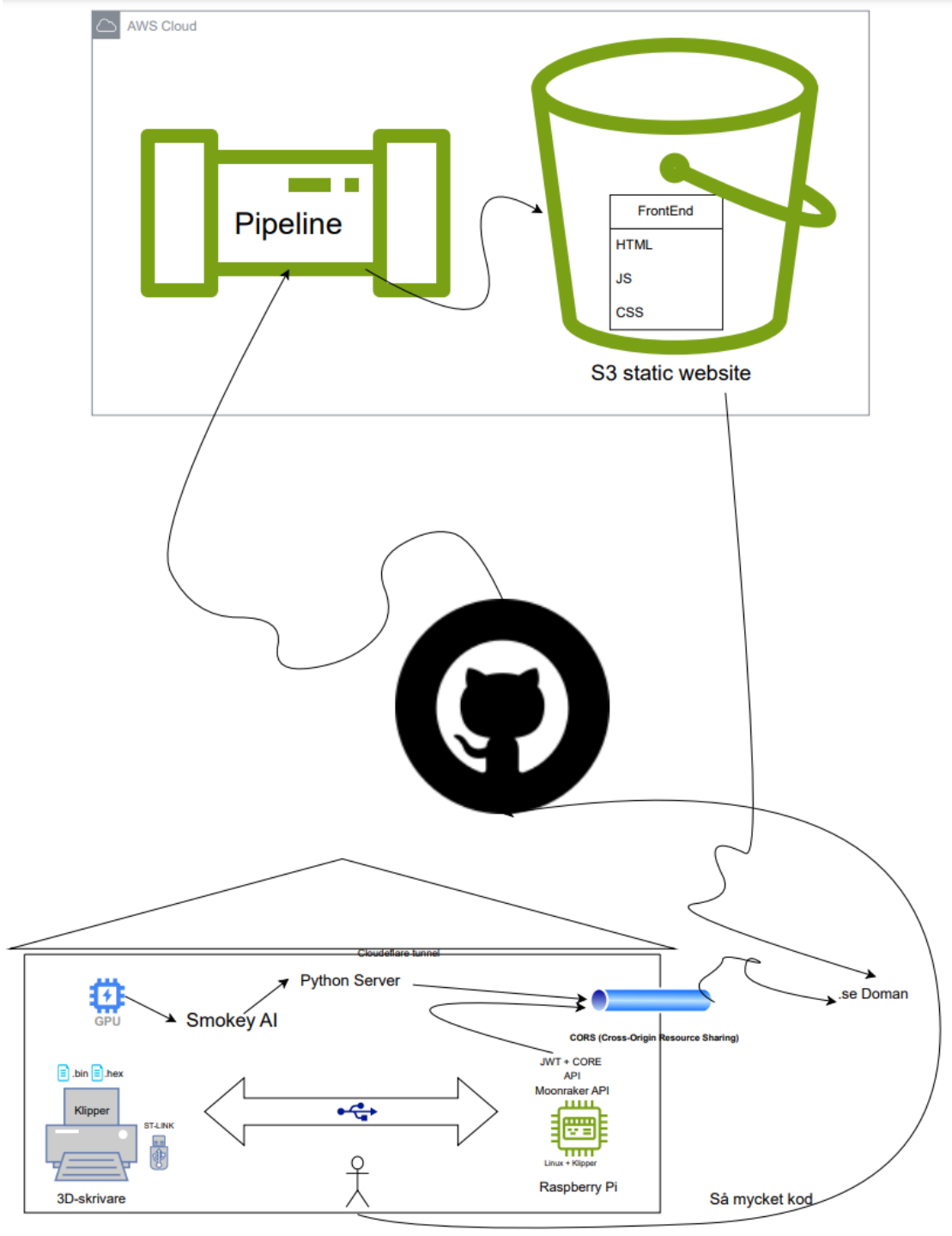



HTML
CSS
JS



Static website

http://printer2024.s3-website.eu-north-1.amazonaws.com/


AWS Cloud
Pipeline
FrontEnd
HTML
JS
CSS
S3 static website
Cloudeflare tunnel
GPU
Smokey AI
Python Server
.se Doman
CORS (Cross-Origin Resource Sharing)
JWT + CORE
API
Moonraker API
.bin
.hex
Klipper
ST-LINK
Linux + Klipper
3D-skrivare
Raspberry Pi
Så mycket kod