

Sprint 3 - Präsentation

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Ziel des Projekts

Türklingel

- ❖ Bei Knopfdruck wird ein Foto aufgenommen
- ❖ Gesichtserkennung → Bei Erkennung wird die Tür automatisch geöffnet
- ❖ Foto wird per Telegram an Hausbewohner geschickt
- ❖ Hausbewohner entscheidet, ob Tür geöffnet wird oder nicht

Sprint 3 Präsentation

#29 

Gehäuse Besprechung mit Wernig

#28

Dokumentation überarbeiten für Sprint 3

#26 

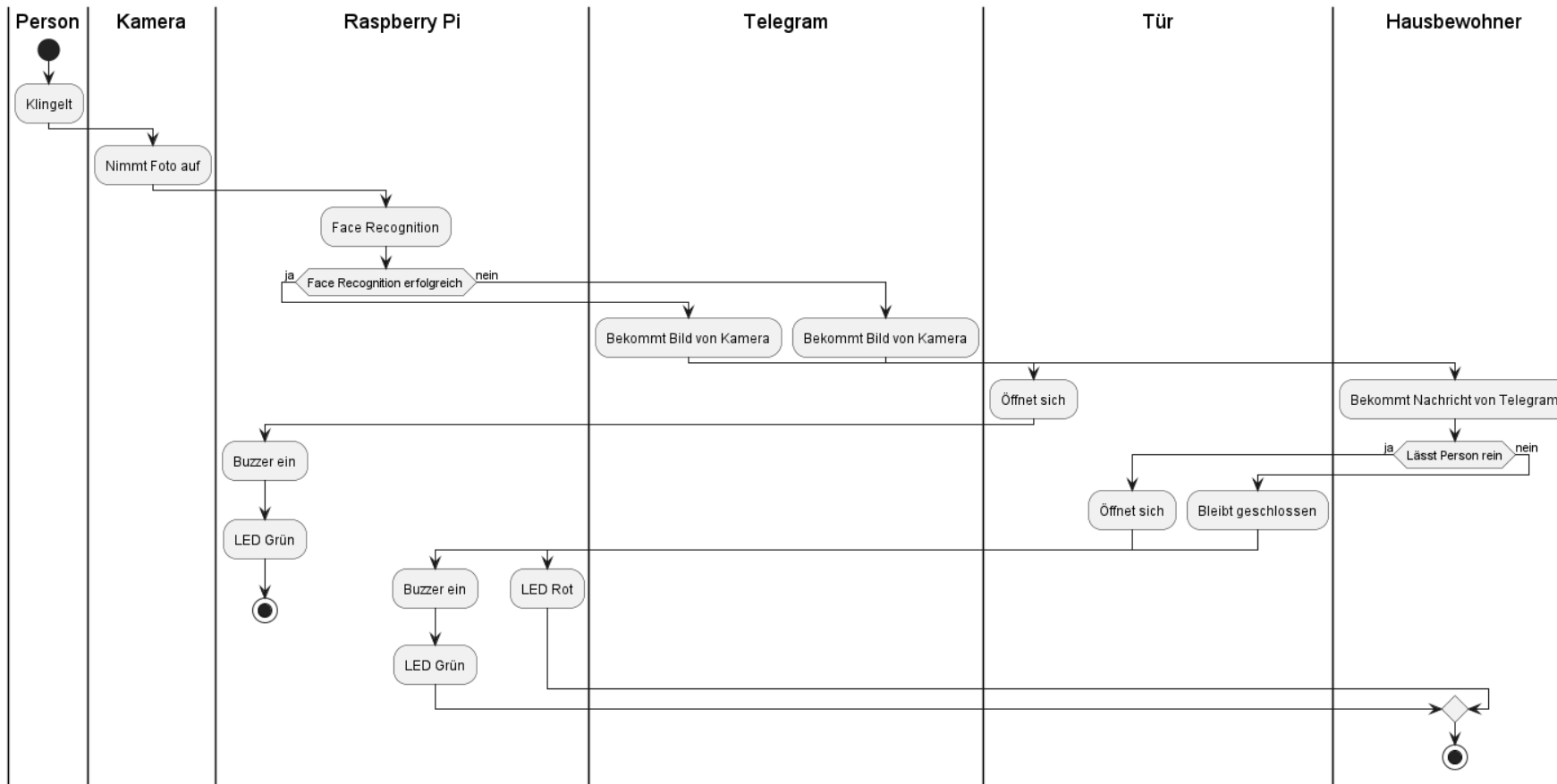
Diagramme überarbeiten für Sprint 3

#25 

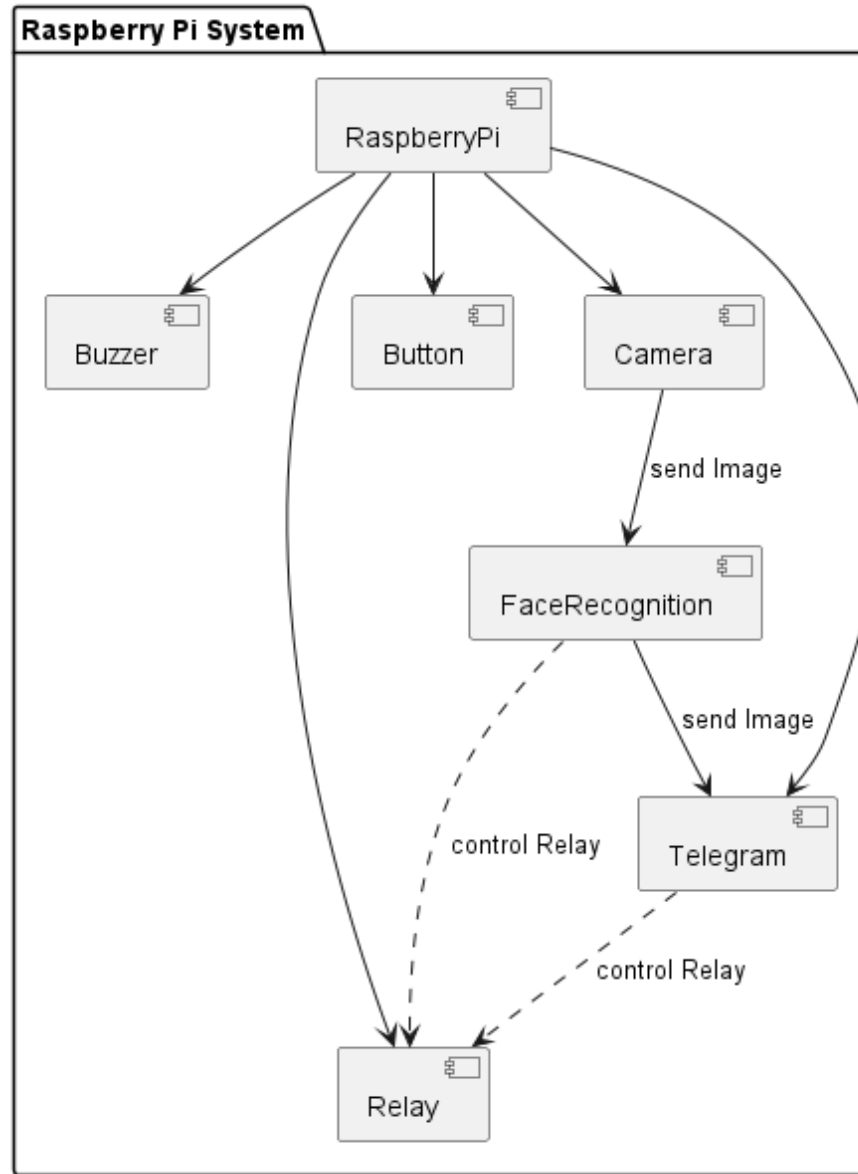
Gesichtserkennung in Doorbell App einbinden

#24  

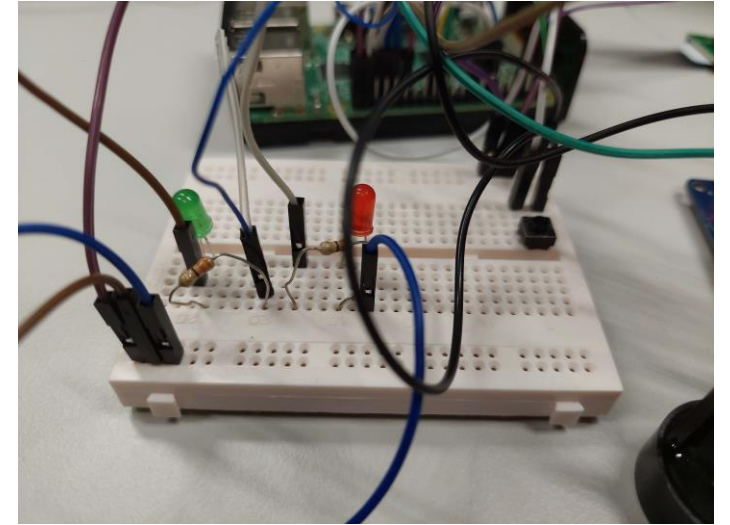
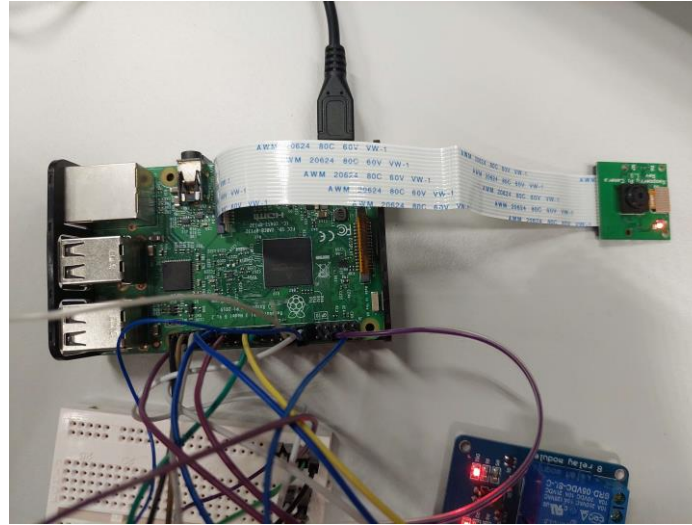
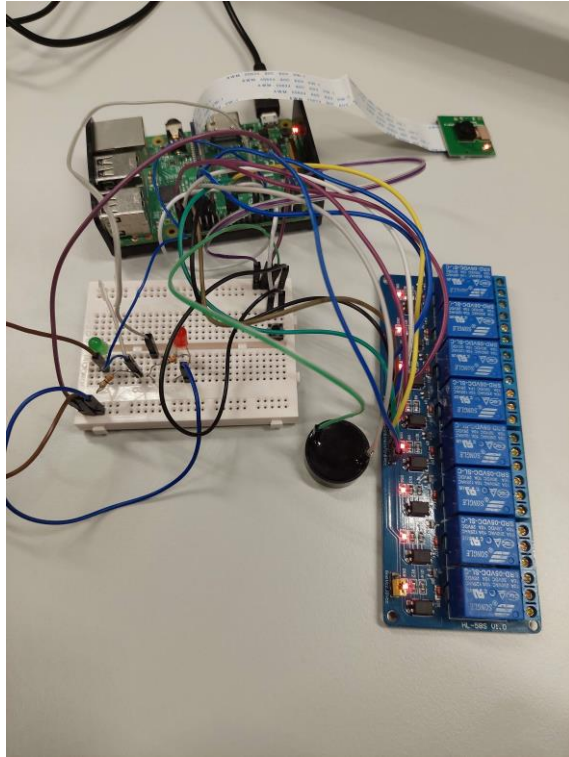
Issues



Aktivitätsdiagramm



Architekturdiagramm



Aufbau

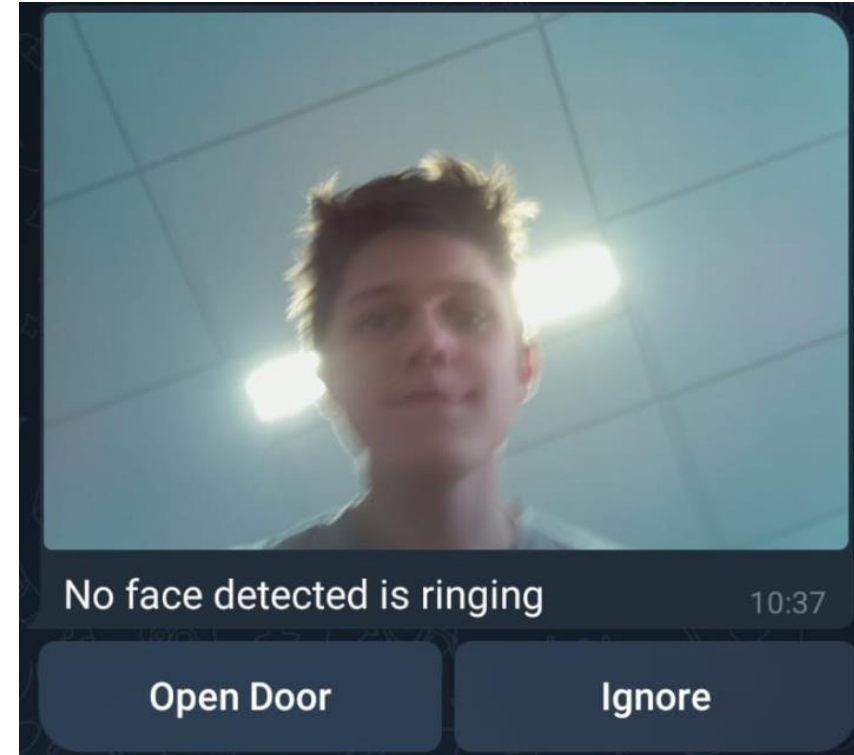


```
1  face_recognition_lock = threading.Lock()
2
3  def initialize_person(image_path, encoding_list, names_list):
4      name = image_path.split("/")[-1].split(".")[0].capitalize()
5      names_list.append(name)
6      print(f"{name} started")
7
8      image = face_recognition.load_image_file(image_path)
9
10     with face_recognition_lock:
11         encoding = face_recognition.face_encodings(image)[0]
12
13         encoding_list.append(encoding)
14         print(f"{name} initialized")
15
16     # List of images to initialize
17     image_paths = ["./persons/adunka.jpg"]
18
19     # Initialize face recognition sequentially
20     for image_path in image_paths:
21         initialize_person(image_path, known_face_encodings, known_face_names)
```

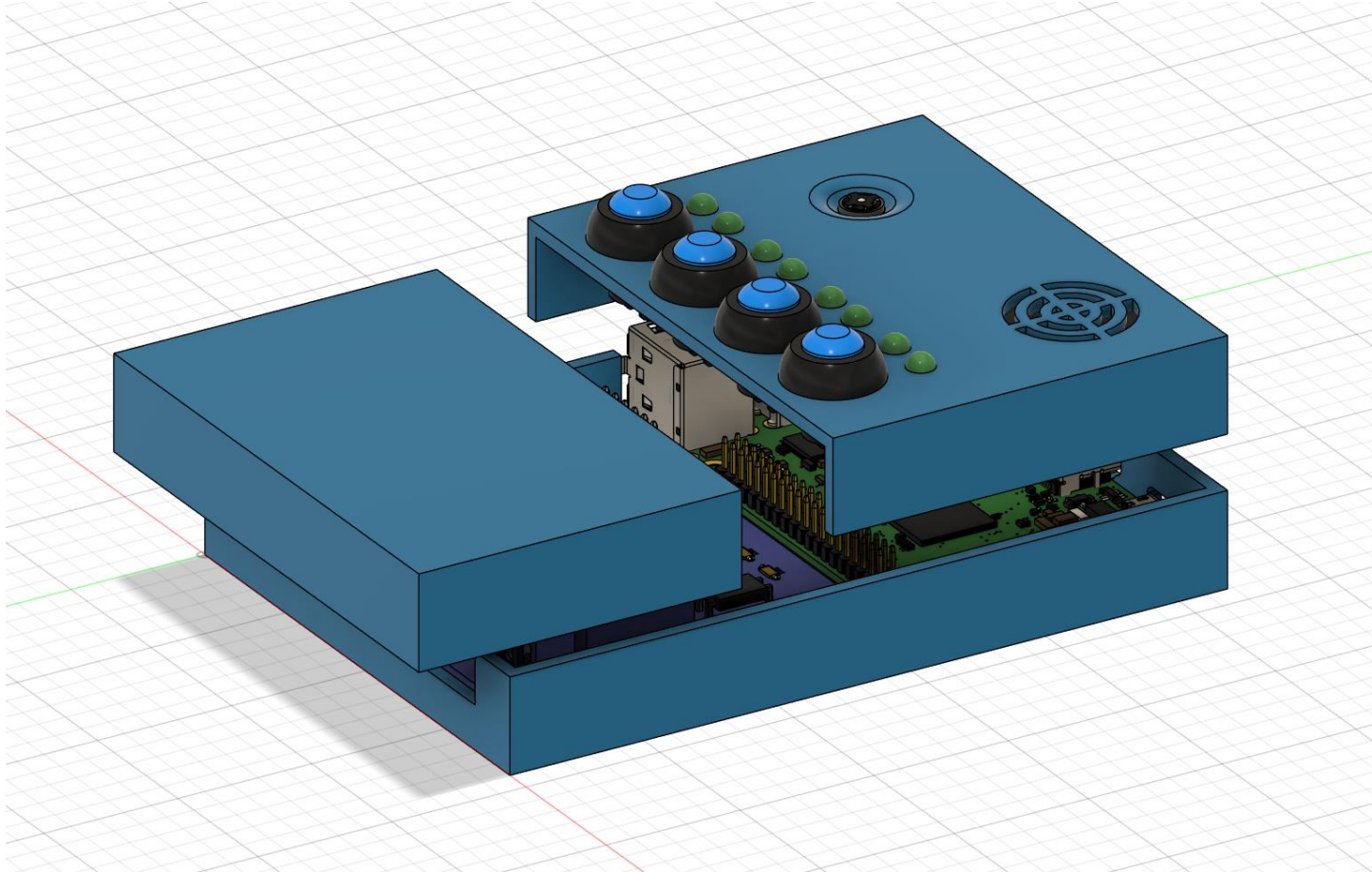
Gesichtserkennung Training

Gesicht erkennen

```
1 image_encoding = face_recognition.face_encodings(face_recognition.load_image_file(image_path))
2
3 if len(image_encoding) > 0:
4     for i, known_encoding in enumerate(known_face_encodings):
5         result_person = face_recognition.compare_faces([known_encoding], image_encoding[0])
6         if result_person[0]:
7             person_detected = known_face_names[i]
8             break
9         else:
10            person_detected = "Unknown"
11 else:
12     person_detected = "No face detected"
13
14 with open(image_path, 'rb') as image_file:
15     if person_detected != "Unknown" and person_detected != "No face detected":
16         bot.send_photo(chat_id, image_file, caption=f'{person_detected} rang. Opened the door.')
17         openDoor()
18     else:
19         bot.send_photo(chat_id, image_file, caption=f'{person_detected} is ringing', reply_markup=markup)
```

Beispiel - Türöffnung



Gehäuse Entwurf

Danke für eure
Aufmerksamkeit! 😄