# Final ProJect

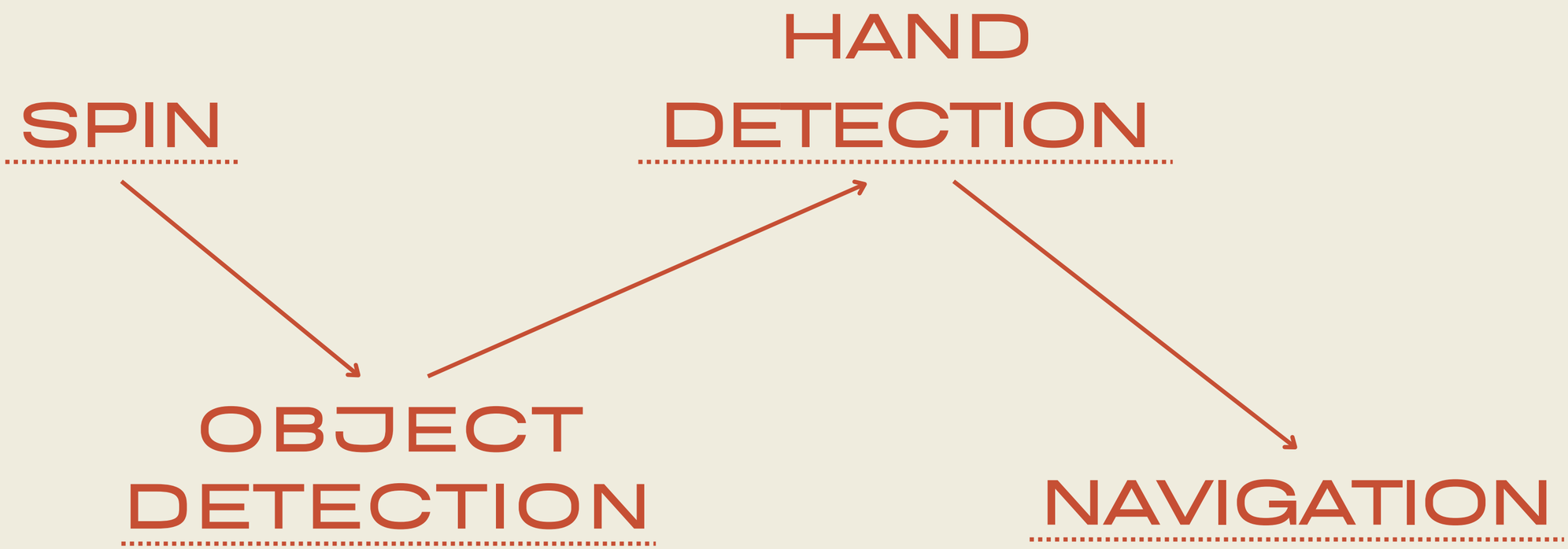
# Artificial Intelligence

Sirapat kanchanasutthirak 6210550410
PiriyaKong Kareekuea 6210552684

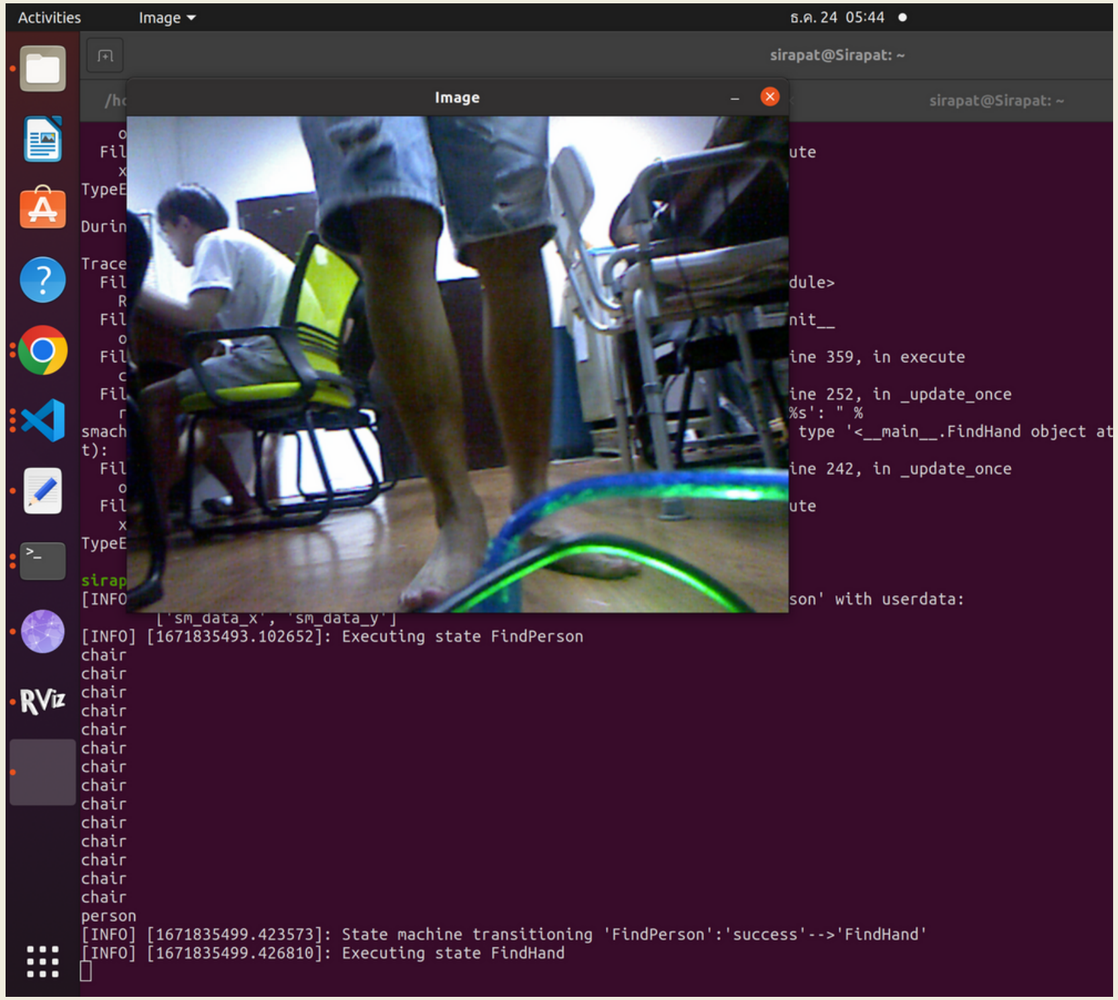
# Task 1

Computer vision, Navigation

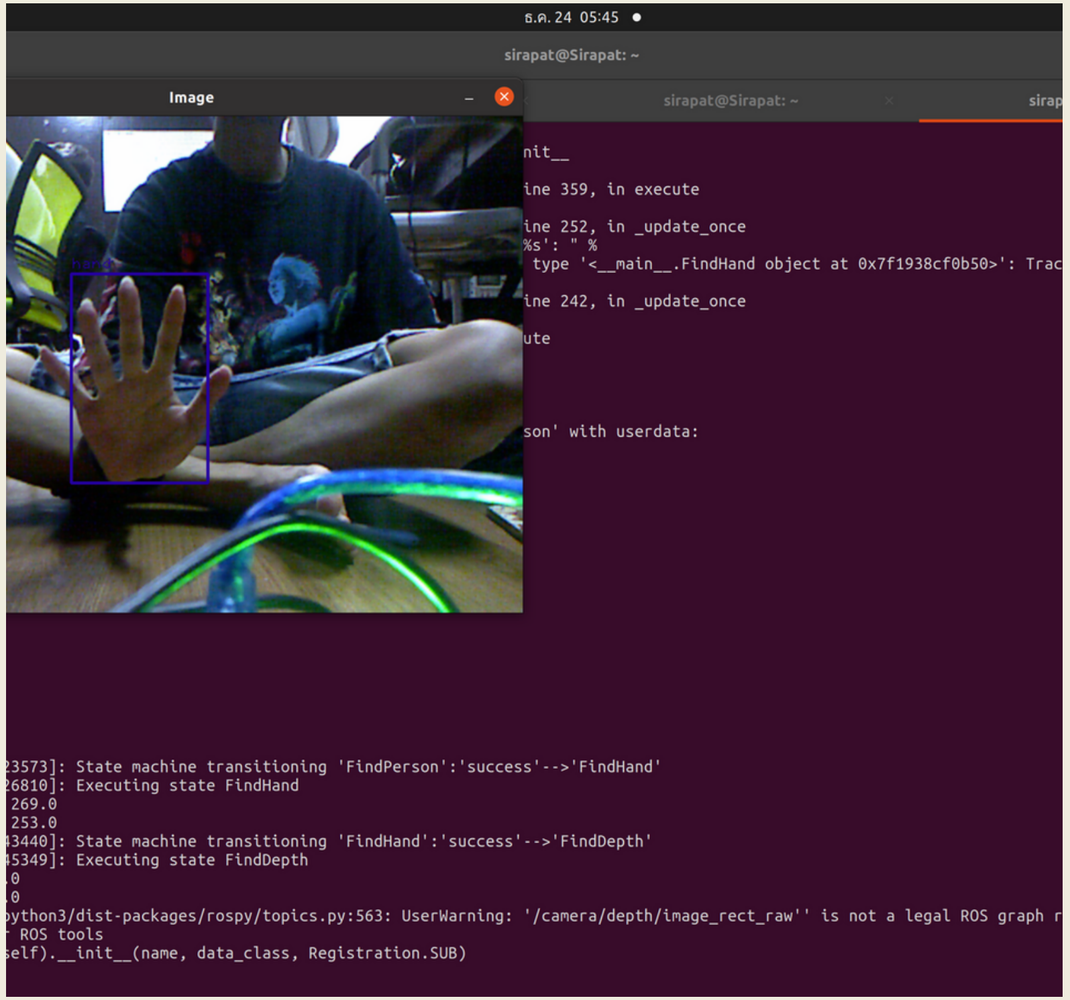
The robot will go to the person who raised him/her hand.


SPIN
HAND DETECTION
OBJECT DETECTION
NAVIGATION

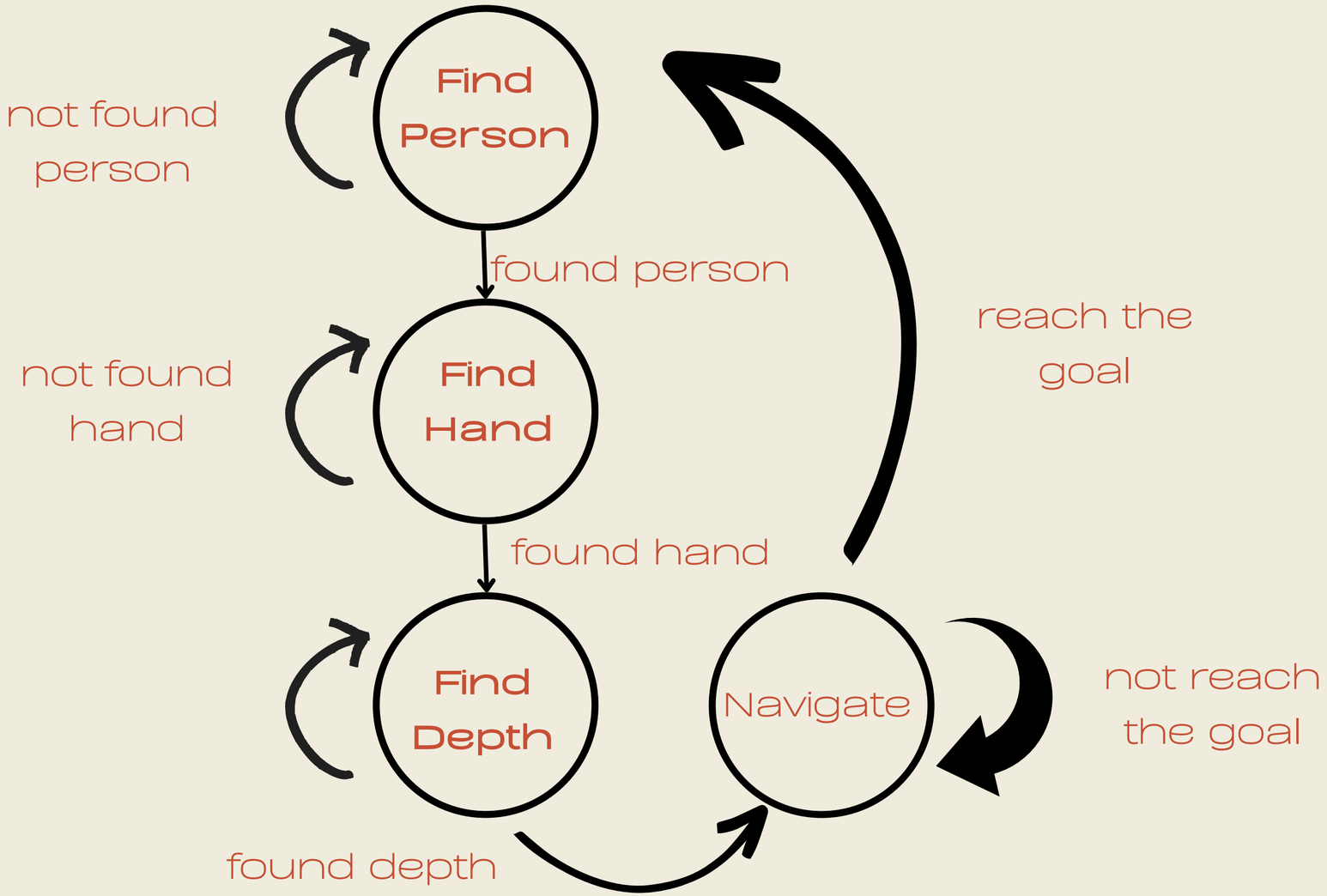
# Human Detection



# Human Detection



# State machine



# State machine

```
with sm:
    smach.StateMachine.add('FindPerson', FindPerson(),
                           transitions={'success':'FindHand','fail':'FindPerson'},
                           remapping={'person_x_in':'sm_data_x','person_y_in':'sm_data_y','hand_coor_x':'sm_data_x','hand_coor_y':'sm_data_y'})

    smach.StateMachine.add('FindHand', FindHand(),
                            transitions={'success':'FindDepth', 'fail':'FindHand'},
                            remapping={'hand_coor_x_in':'sm_data_x','hand_coor_y_in':'sm_data_y','hand_coor_x':'sm_data_x','hand_coor_y':'sm_data_y'})

    smach.StateMachine.add('FindDepth', FindDepth(),
                           transitions={'success':'Navigate', 'fail':'FindDepth'},
                           remapping={'hand_coor_x':'sm_data_x',
                                      'hand_coor_y':'sm_data_y',
                                      'depth':'sm_data_x'})

    smach.StateMachine.add('Navigate', Navigate(),
                           transitions={'success':'FindPerson', 'fail':'Navigate'},
                           remapping={'depth':'sm_data_x'})
```

# Thank You