RoboCupJunior Rescue 2021

Team Code Description

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ESP32 CODE:

- The only file is "main.c" that deals with communication, photoresistor reading and PID control of the motors.

RASPBERRY PI CODE:

- The library from which everything starts is "startup.py", is called from the Raspberry Pi terminal through: "python / home / pi / Desktop /KODIMAP/avvio.py 1 1 35"starts

- This file starts the multiprocessing of the two victims' recognitions through "recognition6.py", and the visualization of the map through "drawamappa2.py".
- Then it moves on to the "logicLAL.py", which, based on all the other libraries, controls the robot.

- Libraries index:
    - "avvio.py": library with which the program is started
    - "bno.py": library for reading the gyro sensor BNO055
    - "classemappa.py": library for creating the data structure that contains the map
    - "com_esp3_0. py ": library for serial communication between raspberry PI and ESP32
    - " drawamap2.py ": library for the dynamic creation of the on-screen map
    - " logicalLAL.py ": main library for motion logic
    - " neopix.py ": library for operation of the neopixel LEDs (not used now)
    - "riconoscimento6.py": library for recognizing victims vision based on opencv
    - "rilascioKit.py" library for using the engines of the KIT release
    - "robot.py": library containing all the variables used in "logicalLAL.py"
    - "sensoriV3.py": library containing all the initializations and functions to read the sensors
    - "Tpa81Lib.py": library for reading the TPA81 temperature sensors