Follow me behavior (detection part)

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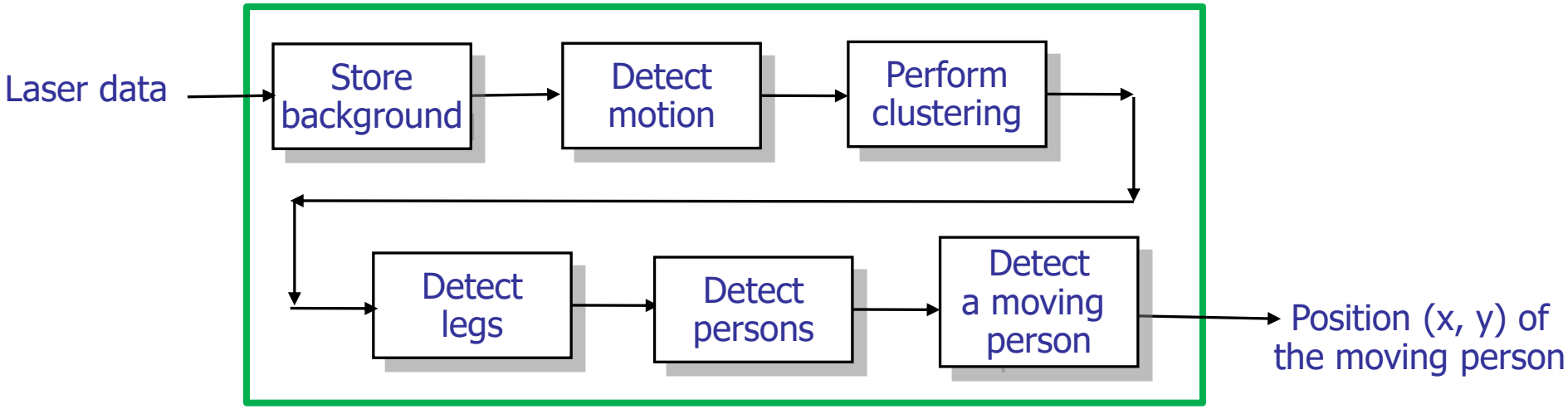
Follow me behavior (perception part): definition (1/2)

- The goal of the lab is to implement the laser processing to detect a moving person;
- A moving person has:
  - Two legs that are moving;
  - Two legs with a maximum distance of 70cms between them;
  - A leg is a cluster with a size between 5cms and 25cms;
  - A moving cluster is a cluster that has at least 75% of its hits that are dynamic;
  - A moving person is a person with

Follow me behavior (perception part): definition (2/2)



- Each time, we receive new laser data, this process is done

Follow me behavior (perception part): installation + implementation

1. In ~/catkin_ws/src/follow_me/src/datmo.cpp: you have to implement the methods:
    1. Store_background;
    2. Reset_motion;
    3. Detect_current_motion;
    4. Detect_motion;
    5. Perform_clustering;
    6. Perform_basic_clustering;
    7. Perform_advanced_clustering;
    8. Detect_legs;
    9. Detect_persons;
    10. Detect_a_moving_person;

Follow me behavior (perception part): tests(1/2)

- Open 5 tabs in a terminal:
  1. Roscore: the ROS master;
  2. Rosbag play *data_file*.bag: to play a saved file;
  3. Rosrun follow_me *detection_node*;
  4. Rosrun follow_me *robot_moving_node*;
     - The laser data are only processed when the robot does not move;
     - This is automatically taken into account by the node *robot_moving_node*;
     - You do not have to take care about this issue.
  5. Rviz: the vizualization tool of ROS.
     - Open your configuration file to see the data and process.

Follow me behavior (perception part): tests(2/2)