



 IntelChair



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Project MVP checklist

GROUP 07

IntelChair consists of a motorized wheelchair that can autonomously move itself in a known environment, giving the user the ability of hands free mobility while sitting in the chair.

MVP Features

• Manual Control

- ☒ Virtual joystick on a mobile application.
- ☒ RosBridge and roslibJS integration for communication.
- ☒ Control de wheelchair with the virtual joystick.

• Room Mapping

- ☒ Retrieve data from the sensors (Laser, IMU, Kinect).
- ☒ Generate odometry values from the sensors.
- ☒ Map a closed environment with the wheelchair.

• Autonomous Navigation

- ☒ Locate the wheelchair in the map.
- ☒ Travel autonomously to any location given by the user.
- ☐ Set and label predefined locations on the map.

Extra Features

• Administration Dashboard

- ☒ Control user access and wheelchair properties.

• Voice Control

- ☒ Control the application with voice commands.

• Follow User

- ☒ Have the wheelchair recognize and follow the user.

• Object Avoidance

- ☐ While navigating, avoid dynamic objects.

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<http://bit.ly/intelchair>
http://xcoa.av.it.pt/~pei2018-2019_g07/