Robot Sensor Motor

★ Robot Package

Hardware ─── Software

Hardware:
{ Mechanism, motors, gears, Circuit, Sensors etc }

Software:
{ (Firmware)
(Application Software)
↓
build map, navigates, Guide motion, Perceives environment }
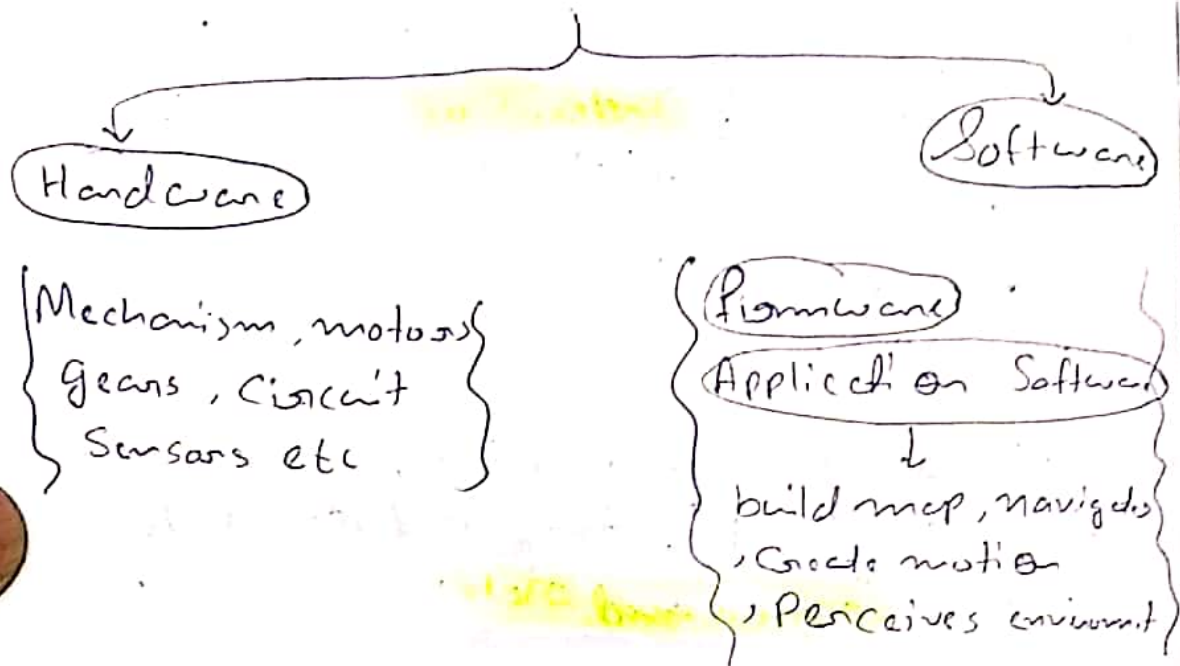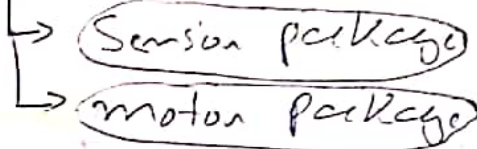
⇒ ROS can be classified as application Software and depending on the Specialized applications it is classified as (robot package)
→ (Sensor package)
→ (motor package)

★ Sensor package

1D Range Finder ⇒ Infrared distance Sensor.

2D Range Finder ⇒ LiDAR

3D Sensors ⇒ Intel's RealSense , Microsoft's Kinect , ASUS's Xetion

 # Audio/Speech Recognition ⟹ Currently, there are very few ones added to Speech recognition but it seems to be added continuously.

 # Cameras ⟹ Object recognition, face recognition, Character recognition.

* Depth Camera

⟹ It can be divided into various types according to the method of acquiring Information:

- ToF (Time Of Flight)
- Structured Light
- Stereo Method.

 # ToF

⟹ In ToF method eradicates infrared rays and measure the distance by the time it returns.

⟹ ToF is more expensive than Structured Light.

 # Structured Light

⟹ Structured Light Projector and Camera is used.

⟹ Product now become a history.

Stereo

⇒ It has been researched from much longer time than previous two types.

⇒ Distance is calculated using binocular Parallax like the left and right eyes of a person

* How to use Public Package
↳ ROS Index
↳ Select distributio
↳ Select package
↳ Check dependencio
↳ follow the Instruction

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