Autonomous Mobile Manipulator

08-Jan-2018

https://github.com/carebare47/PROJ515/

Project manager

Project dates 01-Feb-2018 - 20-Apr-2018

Completion0%Tasks63Resources2

Tasks

Name	Begin date	End date
Gripper	01/02/18	16/03/18
Find suitable servos	02/02/18	02/02/18
Mechanics	01/02/18	07/02/18
CAD	01/02/18	05/02/18
Integrate camera	01/02/18	01/02/18
Integrate LEDs	01/02/18	01/02/18
Integrate PCB	01/02/18	01/02/18
Finish gripper CAD	03/02/18	05/02/18
CAM	06/02/18	07/02/18
3D print gripper	06/02/18	07/02/18
Electronics	24/02/18	15/03/18
Schematics	24/02/18	24/02/18
LED driver and servo breakout	24/02/18	24/02/18
PCB layout	26/02/18	26/02/18
Get PCB made	27/02/18	14/03/18
Gripper PCB assembly	15/03/18	15/03/18
Assemble gripper	08/02/18	08/02/18
Gripper control software	06/02/18	06/02/18
Gripper testing	16/03/18	16/03/18
Gripper Finished	17/03/18	17/03/18
Vision	01/02/18	23/02/18
Get data on QR codes distance vs resolution vs size	01/02/18	01/02/18
Hand cam	10/02/18	20/02/18
Choose/install fiducial localisation software (hand)	10/02/18	12/02/18
Software development	13/02/18	20/02/18
Hand cam node	13/02/18	19/02/18
Visual servoing	13/02/18	17/02/18

Tasks

Name	Begin date	End date
Gripper close trigger when gripper is in the right place	19/02/18	19/02/18
Test visual servoing and gripper close (not on arm)	20/02/18	20/02/18
Head cam	13/02/18	23/02/18
Choose/install fiducial localisation software (head)	13/02/18	14/02/18
Write node to recieve fiducial detected signal and pass location to waypoint node (Object mapper)	15/02/18	15/02/18
Test head cam identification and saving with waypoint node	22/02/18	23/02/18
Headcam can identify, locate and save the location of objects	24/02/18	24/02/18
Localisation/Navigation	02/02/18	21/02/18
Make sure everything still works	02/02/18	02/02/18
Fix encoder	03/02/18	06/02/18
Evaluate current performance	07/02/18	09/02/18
Go to object identified	22/02/18	22/02/18
Arm	01/02/18	21/03/18
Mounting arm on base	17/03/18	21/03/18
Decide on mounting method for arm	17/03/18	17/03/18
Design arm mount	19/03/18	19/03/18
Build arm mount	20/03/18	20/03/18
Mount arm	21/03/18	21/03/18
Mounting gripper on arm	17/03/18	21/03/18
Design gripper to arm mount	17/03/18	17/03/18
Print gripper mount	19/03/18	20/03/18
Mount gripper on arm	21/03/18	21/03/18
Control	01/02/18	09/03/18
Learn how to control arm	01/02/18	03/02/18
Control node	24/02/18	09/03/18
Move gripper towards identified object	24/02/18	28/02/18

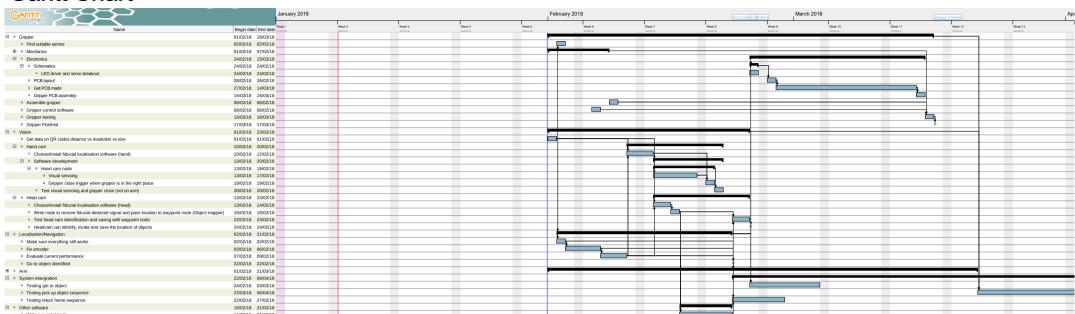
Name	Begin date	End date
Pass control to hand cam when close	01/03/18	02/03/18
Once hand cam node reports success, raise object and bring close to robot	03/03/18	03/03/18
Testing	05/03/18	09/03/18
System intergration	22/02/18	06/04/18
Testing get to object	24/02/18	03/03/18
Testing pick up object sequence	22/03/18	06/04/18
Testing return home sequence	22/02/18	27/02/18
Other software	16/02/18	21/02/18
Write waypoint node	16/02/18	21/02/18
Final hardware due date (estimate)	20/04/18	20/04/18

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20/04/18 20/04/18

Gantt Chart

Final hardware due date (estimate)

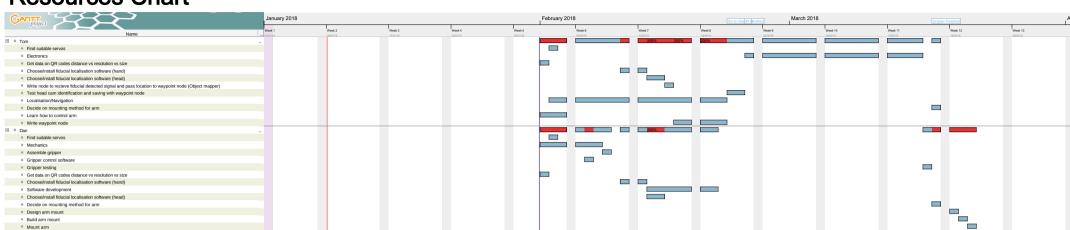


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Resources Chart

Mounting gripper on arm

Learn how to control arm



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