

# Weekly Presentation

## Week 42

Luleå University of Technology

October 13, 2020





















# Overview

- 1 Status update
  - Milestone review
  - Challenges
- 2 Arrowhead
- 3 Computer Vision

## Week 41 - Bot V1

⚠ Past due by 2 days 71% complete

Assemble V1 of robot. make the base move with the robot arm





🕒 4 Open ✓ 10 Closed	
<input checked="" type="checkbox"/>  <b>WIKI for communcation Raspberry pi and Dynamixel</b> <span>documentation</span> <span>raspberri pi</span> 	#25 by edwced was closed 17 hours ago
<input type="checkbox"/>  <b>Finish report workflow - Edward K</b> <span>report</span> 	#31 by Partins was closed 23 hours ago
<input type="checkbox"/>  <b>Test cameras</b> <span>computer vision</span> <span>nvidia</span> 	#15 by Partins was closed 6 days ago 0 of 3
<input type="checkbox"/>  <b>3D-print a box for the NVIDIA</b> <span>nvidia</span> 	#16 by Partins was closed 6 days ago
<input type="checkbox"/>  <b>Print camera case</b> <span>computer vision</span> 	#35 by Partins was closed 6 days ago
<input type="checkbox"/>  <b>Make arm pick something up</b> <span>robot arm</span> 	#36 by edwced was closed 6 days ago
<input type="checkbox"/>  <b>Gripping Mechanism</b> <span>robot arm</span> 	#22 by NiklasDahlquist1 was closed 6 days ago
<input type="checkbox"/>  <b>Make two PCBs with TTL parts</b> <span>movable base</span> <span>robot arm</span> 	#28 by Partins was closed 6 days ago
<input type="checkbox"/>  <b>Make the arm move</b> <span>robot arm</span> 	#27 by Partins was closed 7 days ago
<input type="checkbox"/>  <b>Finish report workflow - Niklas</b> <span>report</span> 	#30 by Partins was closed 8 days ago 11 1

# Unfinished

## Week 41 - Bot V1

⚠ Past due by 2 days 76% complete

Assemble V1 of robot, make the base move with the robot arm

<input type="checkbox"/>	🕒 3 Open ✓ 10 Closed		
<input checked="" type="checkbox"/>	🕒 <b>Make the base move</b> <b>movable base</b> <b>raspberry pi</b>		💬 1
	#26 opened 8 days ago by Partins  4 of 7		
<input type="checkbox"/>	🕒 <b>Finish report workflow - Albin</b> <b>report</b>		💬 1
	#32 opened 8 days ago by Partins		
<input type="checkbox"/>	🕒 <b>Finish report workflow - Måns</b> <b>report</b>		💬 1
	#33 opened 8 days ago by Partins		

# Weekly plan

## Week 42

Due by October 18, 2020 0% complete

<input type="checkbox"/>	🕒 10 Open ✓ 0 Closed	
<input type="checkbox"/>	🕒 Implement Forward Kinematics <span>ROS</span> <span>robot arm</span>	👤
	#37 opened 6 days ago by Partins 0 of 5	
<input checked="" type="checkbox"/>	🕒 Implement Inverse Kinematics <span>ROS</span> <span>robot arm</span>	👤
	#38 opened 6 days ago by Partins 0 of 5	
<input type="checkbox"/>	🕒 Write a motor node <span>ROS</span> <span>movable base</span> <span>nvidia</span> <span>robot arm</span>	👤 1
	#39 opened 6 days ago by Partins 0 of 7	
<input type="checkbox"/>	🕒 HSV Color space <span>computer vision</span> <span>report</span> <span>theory</span>	👤 1
	#14 opened 22 days ago by Partins	
<input type="checkbox"/>	🕒 Initial Arrowhead <span>ROS</span> <span>arrowhead</span> <span>raspberrypi</span>	👤 1
	#5 opened 28 days ago by Partins	
<input type="checkbox"/>	🕒 Setup cloud for both groups at LUDD <span>arrowhead</span>	👤
	#42 opened 18 hours ago by Partins	
<input type="checkbox"/>	🕒 Implement Arrowhead - ROS <span>arrowhead</span>	👤
	#43 opened 18 hours ago by Partins	
<input type="checkbox"/>	🕒 Port MV to ROS node <span>ROS</span> <span>computer vision</span>	👤
	#44 opened 18 hours ago by Partins	
<input type="checkbox"/>	🕒 Start writing base part <span>report</span> <span>theory</span>	👤
	#45 opened 17 hours ago by Partins	
<input type="checkbox"/>	🕒 Plan how to integrate everything <span>arrowhead</span>	👤
	#29 opened 8 days ago by Partins	

# Challenges

- TTL communication on NVIDIA
  - ▶ Ordered a USB-converter
- Wheel mode gives no feedback
  - ▶ Not needed for line following
  - ▶ We know the distance of QR codes
- Can't get HTTPS work with C++ (Arrowhead)
  - ▶ More on that soon

# Arrowhead

# Computer Vision



# Questions?