

**Annex. D**

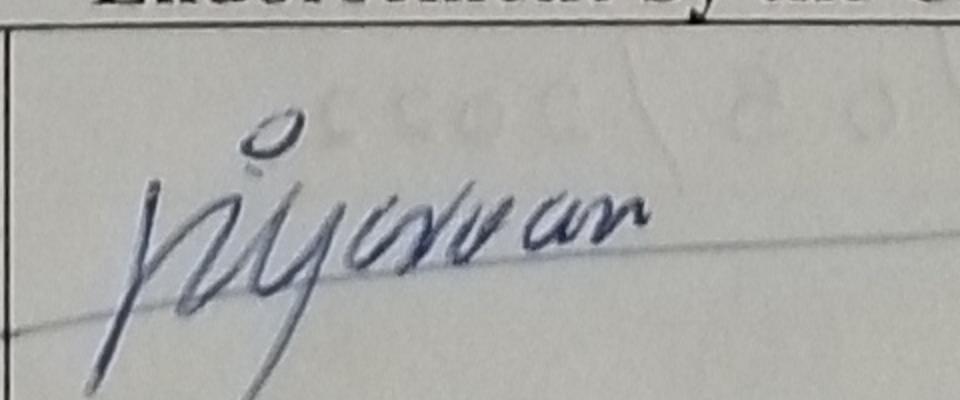
**FOUR - WEEKLY CONTINUOUS ASSESSMENT REPORT**  
 (Please Refer Section 9, page 5 of Training Guideline Book for details)

#	Report Details								
1	Report Number	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input checked="" type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>		
2	For the Duration	From	28	02	2022	To	27	03	2022

#	Undergraduate's Details											
1	Name as per Register	Mr. / Ms. THALAGALA B. P.										
2	Index Number	180631J										
3	Discipline	BM <input type="checkbox"/>	CH <input type="checkbox"/>	CE <input type="checkbox"/>	CS <input type="checkbox"/>	EE <input type="checkbox"/>	EN <input checked="" type="checkbox"/>	ER <input type="checkbox"/>	ME <input type="checkbox"/>	MT <input type="checkbox"/>	TL <input type="checkbox"/>	TT <input type="checkbox"/>
4	Contact Phone Number	0750296594										
5	Email	180631J@uomol lk										
6	Personal Address During	326/2, Kandahera, Dedigamawa										

#	Training Provider Details	
1	Training Provider's Name	L.E. Robotics (Pvt) Ltd.
2	Address of Corporate Office	100/4, Divulapitiya Rd, Minuwangoda
3	Address of Worksite	100/4, Divulapitiya Rd, Minuwangoda.
4	Nearest City to Worksite	Minuwangoda.
5	Name of Supervisor	J. A. L. Jayasinghe
6	Supervisor Position	Engineer In-charge
7	Supervisor Phone No.	077 - 2716181
8	Email	jakenie@lerobotics.lk

Important Note!	
A summary of undergraduate's work experience during the considered four (04) weeks period to be attached along with this duly filled Annex. Highlight any shortcomings, problems that the undergraduate experienced, if there were any, for the purpose of improving. Finally, make sure to attach completed assessment by the Supervisor (see overleaf).	

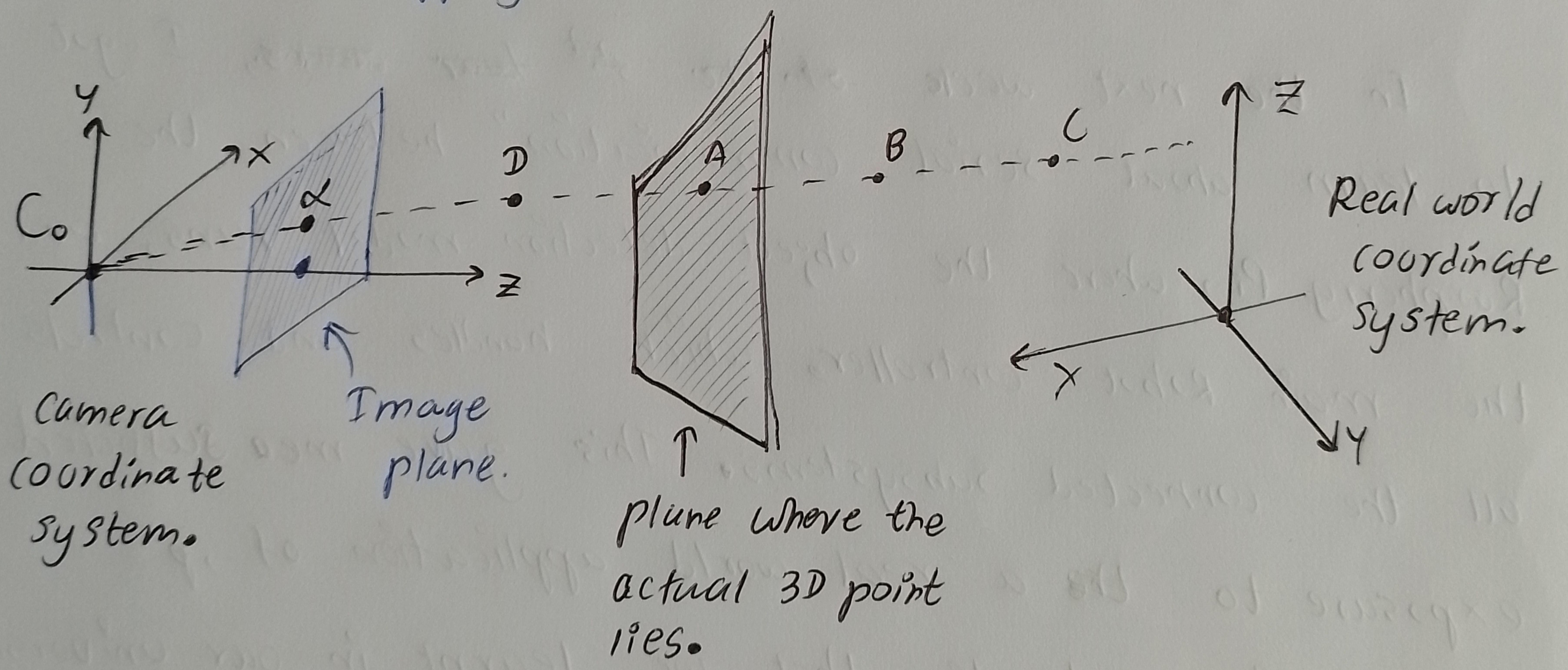
Endorsement by the Undergraduate			
Signature of Undergraduate		Date	29/03/2022

Supervisor's Assessment on Undergraduate							
[rate on a scale from 1 (Disagree) to 5 (Agree)]							
<b>A</b>	<b>Behavioral:</b>		1	2	3	4	5
1	Thinks independently	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2	Takes initiatives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3	Reliable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4	Organized and manages time well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5	Results oriented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6	Ability to learn from all levels of workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7	Adaptability to different environments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8	Open to different opinions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	Ready to seek assistance when necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10	Communicates well in all formats	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>B</b>	<b>Technical:</b>		1	2	3	4	5
1	Knows fundamentals related to work assigned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2	Able to apply fundamentals to practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3	Able to analyse and troubleshoot problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4	Engages modern tools and techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5	Develops related hands on skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6	Concerned with quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7	Performs work in a safe manner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8	Develops skills in planning & implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	Understands costs & benefits relationships	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10	Understands business operations in local & global context	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<b>C</b>	<b>Any Other Remark:</b>	<i>Satisfactory. Can further improve with more industrial exposure.</i>					
<b>D</b>	No. of Days of leave during 4-week period:	Authorized	<input type="radio"/>	Unauthorized	<input type="radio"/>		
<b>E</b>	Endorsement by the Supervisor:						
1	Name of the Supervisor	<i>J. A. L. Jayasinghe</i>		Official Stamp	<i>L.E. ROBOTICS (PVT.) LTD.</i>		
2	Position				<i>..... ..... .....</i>		
3	Signature				<i>..... ..... .....</i>		
4	Date	<i>10/05/2022</i>			<i>..... ..... .....</i>		

# Summary of Work Experience : Report Number 03

From 28/02/2022 To 27/03/2022

The duty of a camera is to map a 3D scene in the real world to 2D image plane. In computer vision literature this transformation is known as the "forward-projection" and it is an obvious / simple task. However, reverse of this is not so obvious and researches are going on to find methods to do this task efficiently. This 2D image plane to 3D world mapping is known as "back-projection".



Back-projection is not so obvious as mentioned earlier because the point " $d$ " on image plane can be any point that lies on the line joining  $C_0$  and  $C_d$ .

First ~~one~~ week of the ~~third~~ four weeks were used to investigate about efficient methods to do the explained operation.

I went through several research papers and could find a paper that follows an analytical geometric approach to solve the above mentioned operation. It was an ideal solution for the problem at my hand and "OpenCV open source computer vision library was used for the ~~the~~ implementation in the paper This implementation of the algorithms explained, gave me an opportunity to learn how to find better research papers and implement the methodologies to suit <sup>a given</sup> our application.

In the next week ~~of the four weeks~~, I got to learn about "serial communication" between the Raspberry Pi, where the object detection model runs, and the main Robot controller, which handles and controls all the connected Subsystems. This gave me sufficient exposure to ~~the~~ a real world application of, communication protocols that we learnt in our university.

Rest of the weeks of the ~~3rd~~ four weeks of duration were spent on documenting the work carried out so far, and restructuring the code written by me. This gave me an idea of maintaining documentation when it comes to an industrial level project.