

## FOUR WEEKLY EXPECTED OUTCOMES FOLLOW-UP REPORT

#	PO Ref	LO Ref		Structured Training Program Items	Activity Carried Out Under <small>(You may generate a list of activities carried out and the list number can be mentioned here. A single activity can be considered for more than one learning outcome achievement)</small>
		No.	Scale (H,L,M or N/A)		
1	P01	LO2	H	Interfacing the computer vision subsystem to the main robot controller.	* Interfaced the developed computer vision module to the main robot controller using UART (Universal Asynchronous Receiver Transmitter circuitry).
		LO3	L	Analyzing the existing program of the robot's controller to identify its requests.	* Vision system was needed to be compatible with the existing robot. Therefore, robot's controller's code was analyzed thoroughly to understand how it communicates with vision module.)
		LO4	L	Demonstration of the basic communication between the robot and the computer vision module.	* Demonstrated the basic communication between robot and the vision module. That includes handshaking between two systems to properly synchronize with each other.
2	P02	LO1	L	Analyzing the existing program of the robot's controller to identify how it communicates.	* Analyzed the programs of the main robot to understand how it communicates with the vision module.
		LO4	L	Presented the presentation of the required changes in the vision system to be compatible with the robot.	* Configured the computer vision module to be compatible with that program. * Presented the modifications that should be done on the computer vision subsystem, for it to be compatible with the robot. * Feedbacks were received also.
3	P03	LO4	L	Interfacing the computer vision subsystem to the main controller of the robot for operation.	* Modified the program of the object detection framework to communicate with robot. Because vision system's purpose was to provide data of detected objects to the robot for further processing.
4	P05	LO2	H	Interfacing the computer vision subsystem to the main controller of the robot.	* Used oscilloscope with the help of the supervisor to debug some of the issues found in the communication between the robot and vision unit.
5	P06	LO3	H	Discussion on the importance of documenting the undertaken project when it's handed over.	* Received information related to the best practices that should be followed when composing documentation of the project when it's handed over.
		LO4	M	Demonstration of the core functionality of the vision unit, during operation of pick and place machine.	* Presented the possible further development areas of the vision unit, as it will be useful for future development of the system, for someone else.
		LO5	H	N/A	* Documented such areas of developments.

6	P07	LO5	L	N/A	
					N/A
7	P08	LO3 LO4	M	Documentation of the developed computer vision unit.	* Documented the installation procedure of the vision unit in order to hand over the project, prior to leave the company. * Created a backup folder including everything to setup and integ vision unit and integrate it to robot.
		LO4 LO3	L	Discussion on the importance of documenting the work carried out when leaving the company. document a project when its handed over.	* Received instructions on how to properly
8	P09	LO4	H	Intefacing the computer vision unit to the pick and place machine.	* Worked together with the supervisor and another employee of the company, to integrate vision module to the robot. * Debugged some problems.
9	P10	LO1	L	Documentation of the developed computer vision unit.	* Documented the installation procedure of the vision unit and method of integration it to the main pick and place machine.
		LO4	M	presentation of the basic functionality of the vision unit <del>state</del> during operation.	* Presented the functionality of the vision module to the supervisor, during the operation of the pick and place machine. (communication between the two entities.)
		LO5	H	N/A	N/A
10	P11	LO1	L	Documentation of the developed computer vision systems.	* Documented the installation and integration procedure of the computer vision system, in order to hand over the project to the company for future use.
		LO4	M	presentation of the core functionality of the vision unit, during operation.	* Presented the core functionality of the vision unit to the supervisor, during the operation of the pick and place machine. * Showed the methods of further development of the computer vision unit to the supervisor.
		LO5	L	N/A	N/A

P12	LO1	M	Interfacing the computer vision unit to the main pick and place machine.	* learnt how to integrate two embedded systems to function as a single unit, using various communication protocols. * learnt various debugging methods, useful in such scenarios.
	LO3	M	Documentation of the developed computer vision unit.	* Documented installation and integration procedure of the vision unit, in order to hand properly hand over the project to the company for further development.
	LO4	H	Demonstration of the core functionality of the vision unit during operation of pick & place machine.	* learnt how to demonstrate a finalized project when the project is handed over to the company when leaving. * learnt the importance of showing areas of development undertaken project when leaving a company.
	LO5	H	N/A	N/A

Undergraduate				Supervisor	
Name	Thalagala Bo Po			Name	J. A. L. Jayasinghe
Student ID	1806315	Field	EN	Position	L.E. ROBOTICS (PVT) LTD. Johnie.
Signature	<u>Pijoruum</u>			Signature	Engineer - In - Charge
Date	25/06/2022			Date	28/06/2022