



**University of Colombo
School of Computing**



**ENH3201/EN3101
Industrial Placements
2024/2025
FINAL REPORT**

STUDENT DETAILS

Name of the Student: R.D. Jayasinghe

Index Number: 21000867

Registration Number: 2021/CS/086

**SUPERVISOR / COMPANY
DETAILS**

Name of the Supervisor: Dr. H.E.M.H.B.
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Company Name: MindSys Research Group
of UCSC

Declaration

I do hereby declare that the work reported in this report was exclusively carried out by me under the supervision of Dr. H.E.M.H.B. Ekanayake. To the best of my knowledge, it does not contain any material previously published or written by another person or myself and only it describes the results of my own independent work except where due reference has been made in the text.

Student Name: R.D. Jayasinghe

Registration Number: 2021/CS/086

Index Number: 21000867



Signature:

Date: 06/05/2025

I endorse the declaration by the candidates and it is based on the work of Mr./Ms.
under my supervision.

Certified by:

Supervisor Name: Dr. H.E.M.H.B. Ekanayake



Signature:

Date: 09/05/2025

Abstract

This report documents my industrial placement experience as a Research Intern at MindSys Research Group, University of Colombo School of Computing (UCSC), from 11/21/2024 to 05/30/2025. During this period, I extensively worked on the development of a human-following robot for office automation, evolving the project through a number of iterations from a basic Arduino-based object follower to a sophisticated AprilTag-tracking system.

The internship provided hands-on experience with robotics, computer vision, and multi-agent systems, while applying theoretical knowledge from my studies in addressing real-world issues. Beginning with a simple ultrasonic sensor-based following system, the project progressed through computer vision integration, Raspberry Pi and Arduino integration, and ultimately ended up being an AprilTag tracking system that was able to track specific targets reliably.

I also participated in the Integrated Robotics for Sustainable Coconut Farming project, where I gained troubleshooting experience in flight controllers and signal processing. The internship has significantly enhanced my technical expertise in robotics, programming, and system integration, and refined essential soft skills in problem-solving, research methodologies, and collaborative development.

Acknowledgement

I would want to extend special thanks to the MindSys Research Group at the University of Colombo School of Computing for presenting me with the valuable opportunity of applying and learning in a practically working research setting.

I would like to extend my sincere thanks to Dr. H. E. M. H. B. Ekanayake, the Principal Investigator of MindSys, for the inspiration and leadership provided during my internship. In addition, I am grateful to the research team members, Dr. K. H. E. L. W. Hettiarachchi, Dr. L. N. C. De Silva, and Mr. K. Thilakarathna, for regular mentorship, technical inputs, and encouragement, which were necessary for my growth as a researcher.

I would like to extend my gratitude to my fellow research intern, Chinthana A. Gamachchige, for sharing knowledge and demonstrating the teamwork spirit that enriched this experience. The UCSC administrative staff also deserve a mention for making the internship experience smooth.

Finally, I would like to thank the Professional Development Center of UCSC for its efforts in arranging this industrial placement program, which has helped me bring my academic knowledge to industry practice.

List Of Abbreviations

- AI - Artificial Intelligence
- BCI - Brain-Computer Interface
- IoT - Internet of Things
- ML - Machine Learning
- PWM - Pulse Width Modulation
- ROS - Robot Operating System
- MAS - Multi-Agent Systems
- UCSC - University of Colombo School of Computing

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Chapter I: Company Profile

1.1 Introduction to MindSys Research Group

MindSys - Mind Systems Research Group, University of Colombo School of Computing was established in November 2023 as an interdisciplinary research group situated at the intersection of philosophy, science, and technology. The group is an pioneering effort to unite state-of-the-art computing technologies with deep philosophical thought by taking recourse to both the Eastern and Western intellectual traditions.

The establishment of the research group is a heightened recognition of the need for balanced approaches to cognitive science and artificial intelligence, extending beyond the technical to the philosophical dimensions of consciousness, cognition, and intelligence. Such cross-disciplinary integration positions MindSys uniquely within the research community, particularly from a Sri Lankan point of view.

1.2 Vision and Mission

MindSys envisions a future where technology development is guided by deep insight into human cognition and consciousness. The group's objective is to bridge Buddhist philosophical insights with contemporary Western philosophy to examine the fundamental nature of mind, while also developing practical applications through computational modeling, machine learning, and artificial intelligence.

This dual focus on theoretical depth and practical relevance creates a research environment where philosophical inquiry directly informs technological innovation, and where technological potential reveals new philosophical problems. The mission encompasses the development of human-machine interfaces in a way that will make technology more intuitive, responsive, and beneficial to humanity.

1.3 Research Focus and Methodology

One of the unique aspects of MindSys is its emphasis on interdisciplinary research methods. The group has several robust research foci:

- **Philosophical Integration:** Merging Eastern Buddhist philosophical concepts with Western cognitive science techniques for building more nuanced frameworks for the exploration of consciousness and cognition.

- **Technical Development:** Creating new applications in brain-computer interfaces, neurofeedback systems, and cognitive robotics that apply theoretical knowledge.

- **Human-Machine Interaction:** Expanding the human-technology interaction through rich interfaces, interaction paradigms, and adaptive systems.

- **Applied Solutions:** Developing meaningful solutions that address real-world issues in healthcare, communication, agriculture, and automation.

Research process typically involves a cycle of technical design influenced by philosophical inquiry, empirical verification, and subsequent enhancement of theoretical frameworks as well as practical implementations on the basis of findings.

1.4 Organizational Structure

MindSys is a research group formed to work collaboratively under the leadership of Principal Investigator Dr. H. E. M. H. B. Ekanayake (B.Sc. (Col), M.Phil. (Col), Ph.D. (Stockholm)). The core research team includes:

- Dr. K. H. E. L. W. Hettiarachchi – BIT (Col), MCS (Col), Ph.D. (Barcelona)
- Dr. L. N. C. De Silva – B.Sc. (Pdn), Ph.D. (Col)
- Mr. K. Thilakarathna – BIT (Col), MPhil (Col)

This group of seniors is supported by research interns like me and Chinthana A. Gamachchige throughout my internship. The organizational structure facilitates frequent interaction among senior researchers and interns with an effective knowledge transfer system where the interns are mentored directly while providing value to ongoing research.

The group operates within the broader administrative framework of the University of Colombo School of Computing, drawing on institutional resources while maintaining the autonomy of a specialist research group.

1.5 Technology Stack and Research Areas

MindSys employs a diverse technology stack to support its multidisciplinary research agenda. The primary technologies and research areas include:

Hardware Technologies:

- Brain-Computer Interface (BCI) devices
- Robotics platforms (Arduino, Raspberry Pi)
- IoT sensors and actuators
- Neurofeedback systems
- Drone and flight control systems

Software and Programming:

- Python for machine learning and computer vision
- C++ and Arduino programming for embedded systems
- ROS (Robot Operating System) for robotics applications
- TensorFlow and PyTorch for deep learning
- OpenCV for computer vision applications

Research Areas:

- Cognitive Science and Artificial Intelligence
- Machine Learning and Computational Modeling
- Brain-Computer Interfaces and Neurofeedback
- Human-Machine and Human-Machine-Thing Interaction
- Embodied and Situated Cognition
- Cognitive Robotics and Systems
- Affective Computing
- Decision-Making and Cognitive Neuroscience
- AI Ethics and Responsible Development
- Smart Systems and IoT Integration
- Human-Robot Interaction
- Augmented and Assistive Technologies
- Agricultural Robotics

This comprehensive technology stack enables the group to tackle complex research challenges requiring integration across multiple domains.

1.6 Current Projects

1. Integrated Robotics for Sustainable Coconut Farming
2. Enhanced Human-Machine-Thing Interaction
3. Responsive Electrical Buzz Wire (EBW) for Multidisciplinary Research
4. Human-Following Robot for Office Automation

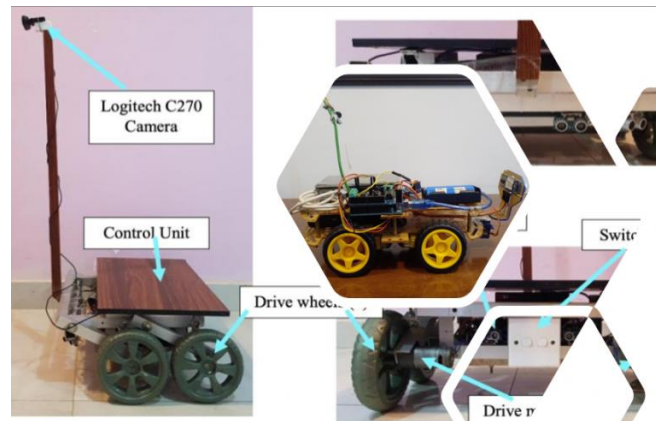


Figure 1: Human-Following Robot for Office Automation

5. ConsciousAI: Understanding AI Consciousness
6. Unlocking the Potential of Underutilized Data for Situated Cognition in Machine Learning

During the internship, I primarily contributed to the Human-Following Robot project, supplemented by working experience on the Integrated Robotics for Sustainable Coconut Farming project.

Chapter II: Evidence of Work Completion, Training, and Experience

2.1 Human-Following Robot Project Evolution

The Human-Following Robot project was the core focus of my internship experience. During my tenure in placement, I developed this system in various levels of development, each from experience and knowledge gained in previous stages. This evolutionary process allowed systematic development of the ability of the robot while providing me with progressively more complex technical challenges.

Phase 1: Arduino-Based Object Following

The project began with the development of a basic object-following car using Arduino technology. This initial phase focused on establishing fundamental robotics principles and simple sensing capabilities.

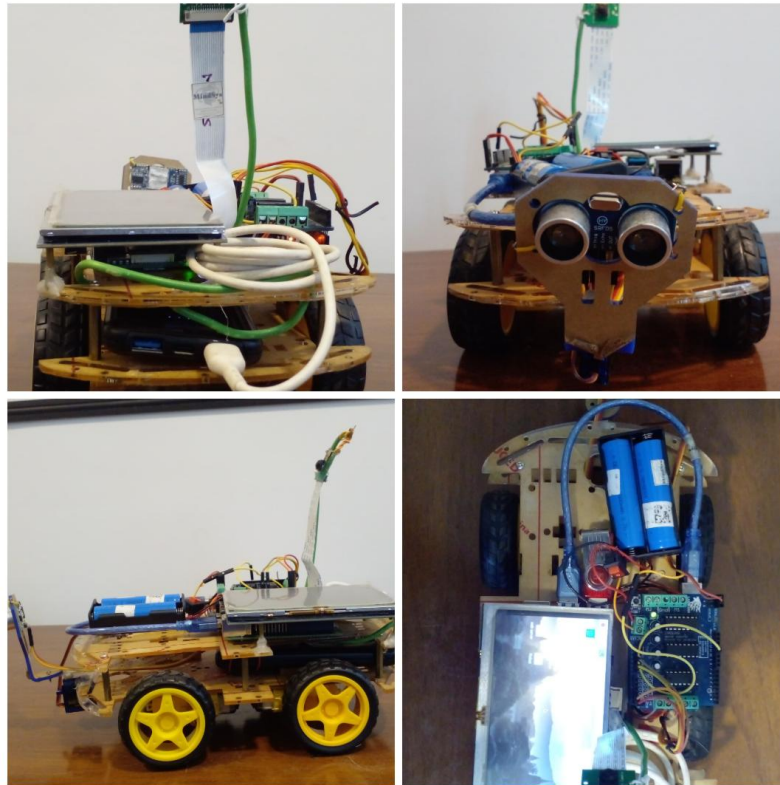


Figure 2: Object-Following Robot Car

Phase 2: Computer Vision Exploration

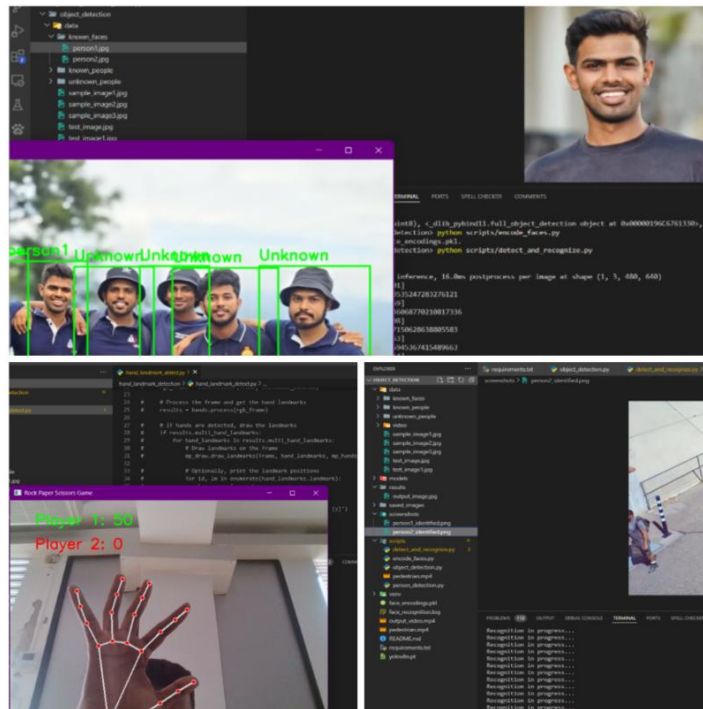


Figure 3: Computer Vision Exploration Mini Projects

Phase 3: Raspberry Pi Integration

The next development focused on integrating a Raspberry Pi as the vision processing unit, providing the computational power needed for real-time computer vision.

Phase 4: Arduino-Raspberry Pi Communication

To create a complete system, I next focused on establishing reliable communication between the Raspberry Pi (vision processing) and Arduino (motor control) components.

Phase 5: Object Tracking Implementation

With the hardware platform established, I next implemented comprehensive object tracking capabilities using computer vision techniques.



Figure 4: Outline of the project's logic

Phase 6: QR Code Tracking Enhancement

To improve target specificity and tracking reliability, I next implemented QR code-based tracking.

Phase 7: AprilTag Tracking System

The final phase involved implementing AprilTag-based tracking for optimal performance.

2.2 Contribution to Coconut Farming Robotics Project

In addition to my primary work on the Human-Following Robot, I also contributed to the Integrated Robotics for Sustainable Coconut Farming project, focusing specifically on flight controller configuration and troubleshooting.

2.2.1 Flight Controller Configuration

Implementation Details:

- Assisted in configuring the SP Racing F3 flight controller using Cleanflight software
- Set up the FS-CT6B 6-channel transmitter and receiver for drone control
- Calibrated sensors and motors for stable flight
- Programmed flight parameters and control characteristics

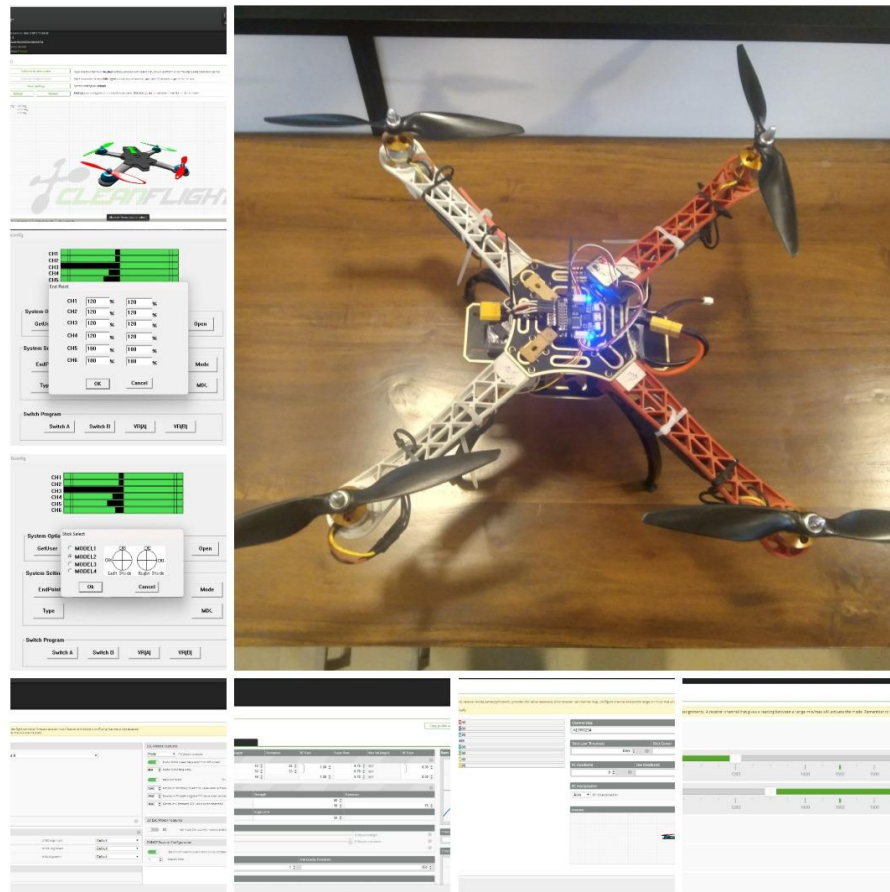


Figure 5: MindSys Research Group's Drone

2.2.2 Signal Troubleshooting

When faced with communication issues between components, I applied systematic troubleshooting techniques to identify and resolve problems.

Chapter III: Challenges and Subject Mapping

3.1 Technical Challenges and Solutions

Throughout the development of the Human-Following Robot, I encountered numerous technical challenges that required creative problem-solving and application of both theoretical knowledge and practical skills.

1. **Limited Processing Capabilities** The Raspberry Pi occasionally struggled with real-time processing of high-resolution video frames, leading to delayed reactions.

Solution: Implemented a multi-threaded architecture that separated image acquisition, processing, and control into parallel processes. Additionally, reduced resolution and applied region-of-interest processing to focus computational resources on relevant image areas.

2. **Reliable Target Detection** Early versions of the tracking system struggled to maintain consistent detection, especially with changing lighting conditions or partial occlusion.

Solution: Progressed from simple color-based detection to marker-based approaches, ultimately implementing AprilTag tracking with confidence scoring. Added adaptive thresholding and contrast enhancement to improve detection in varying lighting.

3. **Control System Stability** The robot initially exhibited oscillating behavior when following targets, alternating between too fast and too slow responses.

Solution: Implemented a PID controller with carefully tuned parameters for smoother response. Added deadband logic to prevent small corrections from causing oscillations, and incorporated motion prediction to anticipate target movement.

3.2 Subject Mapping

My internship was a great opportunity to apply the knowledge I gained in the past two and a half years.

Electronics and Physical Computing (SCS2213)

The principles learned in this course enabled me to design and implement the Arduino-based control system, interface with sensors, and troubleshoot hardware issues. The understanding of electrical fundamentals was particularly valuable when diagnosing issues in the flight controller.

Data Structures and Algorithms (SCS1201)

The algorithmic foundations from this course proved essential for developing efficient processing systems like Queue implementation for command buffering ,Efficiency optimization for real-time constraints and etc.

Practical Implementation: I applied these concepts when developing the tracking algorithms, particularly in optimizing the image processing pipeline for real-time performance. The understanding of algorithmic complexity helped in making appropriate trade-offs between processing speed and accuracy.

Object-Oriented Programming (SCS1209)

The Python implementation of the vision system benefited significantly from object-oriented design, with clear separation of concerns between detection, tracking, and control components. This modular approach made iterative development and testing more manageable.

Group Project Experience (SCS2202 & SCS3214)

Previous group project courses provided valuable experience in project management and collaborative development.

Professional Practice (SCS3215)

The principles from this course guided my approach to documenting the project, communicating progress to supervisors, and considering the broader implications of the technology being developed.

Chapter IV: Self-Reflection & Recommendations

As an individual with a deep passion for **Electronics, Artificial Intelligence, System Integration, Embedded Systems Programming, Computer Vision and Robotics Engineering**, my internship at MindSys Research Group provided the perfect environment to develop my technical abilities and research skills. The research team was exceptionally supportive, offering consistent guidance while encouraging independent exploration. This balance allowed me to grow both technically and professionally throughout the project's evolution.

Working on the human-following robot from its basic Arduino implementation to the sophisticated AprilTag tracking system gave me hands-on experience with the complete development cycle of a robotics project. The opportunity to apply theoretical concepts from my coursework to real-world challenges was invaluable, transforming abstract knowledge into practical skills.

The collaborative atmosphere at MindSys enhanced my ability to work effectively both independently and as part of a team. Regular progress discussions and feedback sessions improved my communication skills and taught me to articulate technical concepts clearly. Meeting project milestones strengthened my time management abilities and cultivated a sense of responsibility toward research outcomes.

This six-month industrial placement has been tremendously rewarding, igniting an even stronger interest in pursuing robotics and AI as a career path. I would strongly recommend this internship to any UCSC undergraduate with enthusiasm for electronics, machine learning, or robotics. It provides an ideal environment for those looking to deepen their technical expertise, develop research methodologies, and experience the satisfaction of creating systems that bridge the gap between computational intelligence and physical interaction. For students passionate about working at the cutting edge of technology, either in future research or industry innovation, this placement offers invaluable preparation and inspiration.

Conclusion

This industrial experience in MindSys Research Group has bridged my theoretical learning with practical application of computer vision and robotics. With the progression of a following human robot from a basic Arduino setup to an advanced AprilTag tracking mechanism, I've gained substantial hands-on experience with iterative engineering development. The technical difficulties encountered provided the opportunities to apply theoretical knowledge encountered in university classes in practical contexts. Apart from the technical skills, I've also developed professional skills in problem-solving, research methodology, and project management. Through this experience, I've been able to define my professional interests in systems integration and robotics while gaining a strong foundation for future growth.

Appendices



IN3101/ENH3201 – Industrial Placement 2024/2025

UCSC

Monthly Progress Report



<u>Progress Report</u>						
Report Number (tick with a v)	1 v	2	3	4	5	6
Student Name	R D Jayasinghe					
Index Number/ Registration Number	21000867, 2021/CS/086					
Company Name	MindSys Research Group of UCSC, Dr. Hiran Ekanayake					
Internship Commencement Date	11/21/2024					
Reporting Period / Month	(12/1/2024 - 12/31/2024) / 2024 December					
<u>Work Carried out during the reporting period</u>						
Week	Brief Description of the Work Carried Out					
1 (12/1/2024 - 12/9/2024)	Program the Optimus Chassis Bare 4WD to move, wander, and avoid obstacle					
2 (12/9/2024 - 12/16/2024)	Program the Optimus Chassis Bare 4WD to move, wander, and following object using ultrasonic sensor					
3 (12/16/2024 - 12/23/2024)	Study RaspberryPi Programming Study Arduino-RPi communication (UART, I2C, etc.)					
4 (12/23/2024 - 12/31/2024)	Write a program to detect objects (vision) using RPi. Resolve the issues with tensorflow and mediapipe.					

Problems Encountered

Raspberry pi 3 is not compatible with some ML Libraries.

Planned work that were unable to carry out during the reporting period with reasons

To be filled by the Placement Officer/Manager/Supervisor

Name of the placement officer/manager	Dr. H.E.M.H.B. Ekanayake		
Contact Number of the placement officer/Manager	0776240726		
Leave Record	No of Approved Leave <input type="text"/>		Days
	No of unapproved Leave <input type="text"/>		
Student has done	<input type="checkbox"/> More than enough <input checked="" type="checkbox"/> Sufficient <input type="checkbox"/> Not Enough <input type="checkbox"/> No		Work for the reporting period
Student is progressing	<input checked="" type="checkbox"/> Well ahead <input type="checkbox"/> Sufficiently <input type="checkbox"/> Not Enough		
Further Comments (if any)			
			
Student's Signature		Placement Officer/Supervisor's Signature	





EN3101/ENH3201 – Industrial Placement 2024/2025

Monthly Progress Report¹

<u>Progress Report</u>						
Report Number (tick with a v)	1	2 v	3	4	5	6
Student Name	R D Jayasinghe					
Index Number/ Registration Number	21000867, 2021/CS/086					
Company Name	MindSys Research Group of UCSC, Dr. Hiran Ekanayake					
Internship Commencement Date	11/21/2024					
Reporting Period / Month	(1/01/2025 - 1/31/2025) / 2025 January					
<u>Work Carried out during the reporting period</u>						
Week	Brief Description of the Work Carried Out					
1 (1/01/2025 - 1/6/2025)	Write a program to detect objects (vision) - complete the task Study about MAS.					
2 (1/6/2025 - 1/13/2025)	Write a program to detect Human (vision) This program tracks people in a video using AI. It detects people with YOLO, follows them using DeepSORT, and identifies them with unique features like movement (gait), color, and size. It compares these features to recognize the same person across frames, even if they temporarily disappear from view.					
3 (1/13/2025 - 1/20/2025)	Same as above					

¹ Monthly progress report should be approved and signed by the Placement Supervisor at the end of each month. This should be attached to the final internship report that should be submitted to the UCSC at the end of the Internship. Please note that the intern should at least submit five (5) monthly progress reports at the end of their internship.

4 (1/20/2025 - 1/31/2025)	Same as above -complete the task Study ROS Framework		
<u>Problems Encountered</u>			
<u>Planned work that were unable to carry out during the reporting period with reasons</u>			
<u>To be filled by the Placement Officer/Manager/Supervisor</u>			
Name of the placement officer/manager	Dr. H.E.M.H.B. Ekanayake		
Contact Number of the placement officer/Manager	0776240726		
Leave Record	No of Approved Leave	<input type="text"/>	Days
	No of unapproved Leave	<input type="text"/>	
Student has done	<input type="checkbox"/> More than enough <input checked="" type="checkbox"/> Sufficient <input type="checkbox"/> Not Enough <input type="checkbox"/> No		Work for the reporting period
Student is progressing	<input checked="" type="checkbox"/> Well ahead <input type="checkbox"/> Sufficiently <input type="checkbox"/> Not Enough		
Further Comments (if any)			
			
Student's Signature		Placement Officer/Supervisor's Signature	



EN3101/ENH3201 – Industrial Placement 2024/2025

Monthly Progress Report²

<u>Progress Report</u>						
Report Number (tick with a v)	1	2	3 v	4	5	6
Student Name	R D Jayasinghe					
Index Number/ Registration Number	21000867, 2021/CS/086					
Company Name	MindSys Research Group of UCSC, Dr. Hiran Ekanayake					
Internship Commencement Date	11/21/2024					
Reporting Period / Month	(02/01/2025 - 02/28/2025) / 2025 February					
<u>Work Carried out during the reporting period</u>						
Week	Brief Description of the Work Carried Out					
1 (02/01/2025 - 2/3/2025)	Integrate simple object tracking (color + shape) to the mobile robot implemented using Arduino and RPi, so that the robot should be able to follow the object while avoiding obstacles.					
2 (2/3/2025 - 2/10/2025)	Same as above					
3 (2/10/2025 - 2/17/2025)	Share(teach) my experience with my friend what I learned during my previous 2 months. -Raspberry pi, Arduino					
4 (2/17/2025 - 2/28/2025)	Improve the simple object tracking project -apply control theory to smooth speed transition -improved turn logic/ improved Serial Command Processing					



² Monthly progress report should be approved and signed by the Placement Supervisor at the end of each month. This should be attached to the final internship report that should be submitted to the UCSC at the end of the Internship. Please note that the intern should at least submit five (5) monthly progress reports at the end of their internship.

Problems Encountered

Raspberry pi 4 is not compatible with some ML Libraries.

Planned work that were unable to carry out during the reporting period with reasons

To be filled by the Placement Officer/Manager/Supervisor

Name of the placement officer/manager	Dr. H.E.M.H.B. Ekanayake		
Contact Number of the placement officer/Manager	0776240726		
Leave Record	No of Approved Leave <input type="text"/>		Days
	No of unapproved Leave <input type="text"/>		
Student has done	<input type="checkbox"/> More than enough <input checked="" type="checkbox"/> Sufficient <input type="checkbox"/> Not Enough <input type="checkbox"/> No	Work for the reporting period	
Student is progressing	<input checked="" type="checkbox"/> Well ahead <input type="checkbox"/> Sufficiently <input type="checkbox"/> Not Enough		
Further Comments (if any)			
			
Student's Signature	Placement Officer/Supervisor's Signature		





EN3101/ENH3201 – Industrial Placement 2024/2025

Monthly Progress Report³

Progress Report						
Report Number (tick with a v)	1	2	3	4 v	5	6
Student Name	R D Jayasinghe					
Index Number/ Registration Number	21000867, 2021/CS/086					
Company Name	MindSys Research Group of UCSC, Dr. Hiran Ekanayake					
Internship Commencement Date	11/21/2024					
Reporting Period / Month	(03/01/2025 - 03/31/2025) / 2025 March					
<u>Work Carried out during the reporting period</u>						
Week	Brief Description of the Work Carried Out					
1 (03/01/2025 - 03/07/2025)	change the source code to track the QR code. -apply control theory to smooth speed transition -improved turn logic/ improved Serial Command Processing					
2 (3/07/2025 - 3/14/2025)	Refactor the project's source code. - apply OOP concepts Study the drone technologies(SP3, cleanflight).					
3 (3/14/2025 - 3/21/2025)	Change the source code to track the simple 6*6 grid pattern Study the drone technologies(SP3, cleanflight).					

³ Monthly progress report should be approved and signed by the Placement Supervisor at the end of each month. This should be attached to the final internship report that should be submitted to the UCSC at the end of the Internship. Please note that the intern should at least submit five (5) monthly progress reports at the end of their internship.

4 (3/21/2025 - 3/31/2025)	Same as above		
<u>Problems Encountered</u>			
Could not establish the connection between receiver and flight controller.			
<u>Planned work that were unable to carry out during the reporting period with reasons</u>			
<u>To be filled by the Placement Officer/Manager/Supervisor</u>			
Name of the placement officer/manager			
Contact Number of the placement officer/Manager			
Leave Record	No of Approved Leave <input type="text"/>		Days
	No of unapproved Leave <input type="text"/>		
Student has done	<input type="checkbox"/> More than enough <input checked="" type="checkbox"/> Sufficient <input type="checkbox"/> Not Enough <input type="checkbox"/> No		Work for the reporting period
Student is progressing	<input type="checkbox"/> Well ahead <input checked="" type="checkbox"/> Sufficiently <input type="checkbox"/> Not Enough		
Further Comments (if any)			
			
Student's Signature		Placement Officer/Supervisor's Signature	

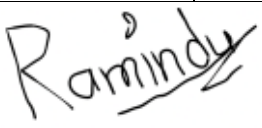



EN3101/ENH3201 – Industrial Placement 2024/2025

Monthly Progress Report⁴

<u>Progress Report</u>						
Report Number (tick with a v)	1	2	3	4	5 v	6
Student Name	R D Jayasinghe					
Index Number/ Registration Number	21000867, 2021/CS/086					
Company Name	MindSys Research Group of UCSC, Dr. Hiran Ekanayake					
Internship Commencement Date	11/21/2024					
Reporting Period / Month	(04/01/2025 - 04/30/2025) / 2025 April					
<u>Work Carried out during the reporting period</u>						
Week	Brief Description of the Work Carried Out					
1 (04/01/2025 - 04/09/2025)	change the source code to track the April tag. solving the problem with signal transition to the flight controller.					
2 (4/09/2025 - 4/17/2025)	same as above(Sinhala Hindu New year holiday)					
3 (4/17/2025 - 4/24/2025)	complete the human following robot literally. solving the problem with signal transition to the flight controller.					

⁴ Monthly progress report should be approved and signed by the Placement Supervisor at the end of each month. This should be attached to the final internship report that should be submitted to the UCSC at the end of the Internship. Please note that the intern should at least submit five (5) monthly progress reports at the end of their internship.

4 (4/24/2025 - 4/30/2025)	completed drone development solved the problem with signal transition to the flight controller. testing apritag following and enhanced tracking.		
<u>Problems Encountered</u>			
Could not establish the connection between receiver and flight controller.			
<u>Planned work that were unable to carry out during the reporting period with reasons</u>			
couldn't finalize final draft of human following robot. couldn't get video video footages of following robot.			
<u>To be filled by the Placement Officer/Manager/Supervisor</u>			
Name of the placement officer/manager			
Contact Number of the placement officer/Manager			
Leave Record	No of Approved Leave <input type="text"/>	No of unapproved Leave <input type="text"/>	Days
Student has done	<input type="checkbox"/> More than enough <input checked="" type="checkbox"/> Sufficient <input type="checkbox"/> Not Enough <input type="checkbox"/> No		Work for the reporting period
Student is progressing	<input type="checkbox"/> Well ahead <input checked="" type="checkbox"/> Sufficiently <input type="checkbox"/> Not Enough		
Further Comments (if any)			
			
Student's Signature		Placement Officer/Supervisor's Signature	

