**PROJECT LOG BOOK**

**(UG PROGRAMME)**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

PROJECT TITLE: **ArUco-Nav : Localization and Visual Navigation of a Scalable Robot Swarm using ArUco Markers**

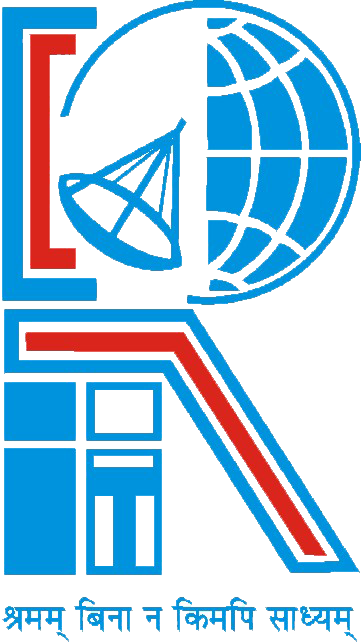
PROJECT GROUP NO.: 25 PAPER CODE: CS892

STUDENT DETAILS:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sl. No. | Class Roll No. | Student Name | Email | Mobile No. |
| 1 | CSE2016/081 | Arindam Samanta | arindamsamanta140@gmail.com | 9748217414 |
| 2 | CSE2016/083 | Sounak Mondal | sounakmandal5996@gmail. com | 9800523240 |
| 3 | CSE2016/084 | Soumik Dhar | granitestate15@gmail.com | 9875596652 |
| 4 | CSE2016/087 | Swarnendu Sardar | contact.swarnendu01@gmail.com | 7003969759 |

SUPERVISOR/s NAME:

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No. | Supervisor Name | Email | Mobile No. |
| 1 | Pramit Ghosh | pramitghosh2002@gmail.com | 9474575828 |



RCC INSTITUTE OF INFORMATION TECHNOLOGY

**Affiliated to Maulana Abul Kalam Azad University of Technology**

CANAL SOUTH ROAD, BELIAGHATA, KOLKATA-700015

Phone: +91 33 2323 2463 | Fax: +91 33 2323 4668

**www.rcciit.org**

|  |  |
| --- | --- |
| Date | 15/02/2020 |
| Work Achieved | Discussion on the hardware modules to be used for building aruco marker based robot navigation |
| Problem Encountered | Webcam FPS and video quality not suitable |
| Work planned for next week | ArUco marker detection using a video feed and opencv module |
| Project plan status (on, behind, ahead) |  |
| Supervisor’s comment |  |

|  |  |
| --- | --- |
| Date | 01/03/2020 |
| Work Achieved | Successful aruco marker detection using opencv and ip webcam |
| Problem Encountered | High latency of ip webcam |
| Work planned for next week | Finding x,y coordinates of aruco markers in local environment |
| Project plan status (on, behind, ahead) |  |
| Supervisor’s comment |  |

|  |  |
| --- | --- |
| Date | 15/03/2020 |
| Work Achieved | Successful detection and localization of aruco markers using aruco-vision-server Android app |
| Problem Encountered | Determination of ArUco marker headings |
| Work planned for next week | Simulation of detected markers in pygame window for further analysis |
| Project plan status (on, behind, ahead) |  |
| Supervisor’s comment |  |

|  |  |
| --- | --- |
| Date | 04/04/2020 |
| Work Achieved | Basic pygame setup and simulation of waypoints navigation based on user input |
| Problem Encountered | Translating the simulation to robot firmware |
| Work planned for next week | Configuring NodeMCU to communicate with the ArUco marker localization test using MQTT. |
| Project plan status (on, behind, ahead) |  |
| Supervisor’s comment |  |