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| SLIIT_LOGO | **Sri Lanka Institute of Information Technology**  *Computational Thinking* |

PROJECT CHARTER

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| PROJECT TITLE | A Gesture+Audio Based Electronics Control System |

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| PROJECT NUMBER |  | (will be assigned by the lecture-in-charge) |

PROJECT GROUP MEMBER DETAILS: (Please start with group leader’s details)

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|  | STUDENT NAME | STUDENT NO. | CONTACT NO. | EMAIL ADDRESS  (SLIIT mail address) | SIGNATURE |
| 1 | Nipun Meegoda  (GROUP LEADER) | it23283626 | 0713786491 | it23283626@my.sliit.lk |  |
| 2 | Ometh Abeyrathne | it23373020 | 0777717794 | it23373020@my.sliit.lk |  |
| 3 | Dinethmin Uduwilaarachchi | it23172814 | 0703391092 | it23172814@my.sliit.lk |  |
| 4 | Amasha Anjalani | it23195684 | 0711118741 | it23195684@my.sliit.lk |  |

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| SUPERVISOR | | | |
|  | | | (will be assigned by the lecture in charge) |
| Name |  | | |
| ACCEPTANCE BY Lecturer | | | |
|  |  |  | |
| Name | Signature | Date | |

PROJECT DETAILS

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| Brief Description of proposed project (including a system diagram): |
| **Our project aims to create a smart home system where you can control lights, fans, and other electronics using gestures, audio, and voice commands. By gestures from your hand, making specific sounds, or speaking simple instructions, you can effortlessly turn devices on and off, making home automation easy and fun. Say goodbye to traditional switches and embrace a new level of convenience and interactivity in your living space.** |

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| Main expected outcomes of the project: |
| **The outcome of this project would be a smart home system that benefits everyone, including individuals with disabilities. By using gestures, sounds, and voice commands, people can easily control lights, fans, and other devices without physical effort. It creates an inclusive and convenient living space, enhancing independence and comfort for all users.** |

WORKLOAD ALLOCATION (Please provide a brief description about the workload allocation)

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| MEMBER 1 | Voice Recognition Subsystem, S.E.R.A |
| **Member 1 – Nipun Meegoda will write the voice recognition subsystem that required to input user voice commands and he also will co-develop a simple voice assistant ‘S.E.R.A [Software Emulated Rational Assistant] w. Ometh Abeyrathne** | |

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| MEMBER 2 | Main Program , User inputs, Ui, S.E.R.A |
| **Member 2 – Ometh Abeyrathne will write the Main Program, which process all the user’s gesture(hand gestures) , and sound inputs (like clap or fingersnap). And also the User Interface for the program and will co-develop S.E.R.A With Nipun Meegoda.** | |

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| MEMBER 3 | Gesture + Audio Processing Subsystem |
| **Member 3 – Dinethmin Udiwilaarachchi will write the Program to ExecuteQueue the identified Gesture, audio or Sound command.** | |

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| MEMBER 4 | Arduino-Python Link Subsystem |
| **Member 4 – Amasha Anjalani will write the subsystem to Send the processed and executequeued command to the Arduino-UNO board.** | |