

## **Senior Design Project Spring Appraisal: ECDME305: Robotic Arm for NES Power Glove**

**Student Name: Ragul Ganesh Anitha Palanivel**

**Faculty Advisor: Prof.Lee Jaeho**

**Student Department: Computer Engineering(CoE)**

**Role in the Project: Programming Lead**

### **Self-Appraisal:**

**Team Role:** Programming Lead

**Contributions:** I was responsible for coding and testing the servos, ensuring smooth and accurate operation. I also soldered critical wiring connections to maintain electrical reliability and prevent malfunctions. In addition to hardware tasks, I contributed to project documentation, slides, and submissions to ensure clear communication of our progress.

Currently, I am designing a custom PCB to improve our hardware setup, requiring research and troubleshooting to optimize circuit layout and functionality. This process is helping refine my skills in electronics design while improving the project's overall efficiency.

**Performance Evaluation:** I have been proactive in completing my tasks, ensuring all components function properly. Testing and refining the servos improved their precision, while my work on wiring helped prevent connectivity issues. The PCB design is a challenging but rewarding task, and I am approaching it methodically to create a reliable final product.

**Team Support:** I communicate effectively and assist my teammates with troubleshooting, especially with servos and wiring. My contributions align with the project's goals, and I ensure steady progress by balancing technical work with documentation. I strive to be reliable, adaptable, and proactive in solving challenges that arise.

### **Team Member Appraisals:**

**Maxine Kruger(ME)**

**Role:** Team Lead

**Contributions:** Maxine managed the design of the forearm CAD, handled 3D printing, and assembled it. Max was fully responsible for integrating the servo motors into the forearm structure.

**Performance Evaluation:** Max efficiently executed the design and assembly of the forearm, ensuring precise fits and functionality.

**Team Support:** Maxine is highly reliable, smoothly manages the team, and ensures coordination and task completion.

## Nicholas Marzan(ME)

**Role:** Financial Lead

**Contributions:** Nicholas designed, printed, and assembled the finger CAD. He also managed project expenses, handling orders independently. Additionally, he contributed to documents and submissions.

**Performance:** He efficiently managed finances while ensuring the successful design and assembly of the fingers and hand. His organization and technical skills have been valuable.

**Team Support:** Nicholas is dependable, balancing financial responsibilities and technical contributions while assisting with documentation and submissions.

## John Milham(ME)

**Role:** Communication Lead

**Contributions:** John, from the mechanical engineering department, designed, printed, and assembled the shoulder CAD. He has also assisted with soldering wires and has been a reliable team member in various situations.

**Performance:** He effectively executed the shoulder design, ensuring proper functionality. His contributions to soldering and assembly have been instrumental in maintaining progress.

**Team Support:** John is always willing to help, making himself available whenever needed. His teamwork and problem-solving skills contribute significantly to the group's success.

Faculty advisor's (Professor Jaeho Lee) feedback:

Ragul Ganesh Anitha Palanivel has shown impressive technical expertise and strong teamwork throughout his Senior Design Project as the Programming Lead for the Robotic Arm for NES Power Glove. He has taken on key responsibilities such as programming and testing servo motors to ensure they operate with precision and reliability. Alongside his technical contributions, Ragul has played an active role in project documentation and maintaining clear communication among team members. He is consistently dependable, adaptable, and supportive, especially when helping others troubleshoot issues related to servos and wiring. His efforts reflect a strong commitment to the success of the project and the team.