Student Engagement Fund Final Reflection

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Development of a Small-Sized Ball-On-Plate Control System for Classroom Use

My time went through working with Dr. Ji-Chul Ryu through the understudy commitment support has been very significant and enlightening for me. Before starting my work, I had to some degree information about the nonlinear control system, and programming yet I was prepared to bounce into the subject. As an understudy examining Mechanical Engineering, I have consistently been keen on an assortment of subjects, for example, Dynamics, Robotics, Controlled system, and Mechanism. My inclinations are tremendous and participate to examine the best way to make a nonlinear system, following the vision system into linearized rendition.

Working with Dr. Ji-Chul Ryu has demonstrated to me what it resembles to be an enthusiastic, dependable, and persevering person. Be that as it may, Dr. Ji-Chul Ryu greeted me wholeheartedly and instructed me all that I had to know. He is so enthusiastic about educating others on how automated system functions when you have a nonlinear system and the best possible ways that I can accomplish a linearized system. His examination ventures are continual regarding controllers and how non-direct mechanical system functions. He has likewise made a little station in his lab where I can find out about the nonlinear system. I discovered that I was not the only one in not thinking about the non-direct system, there is numerous others graduate understudy who thinks about and one of his alumni understudies has just taken a shot at the nonlinear system. This is the reason it is so significant for me to think about the mechanical system to work since my accentuation is on apply autonomy and mechatronics. Additionally, I'm going to seek after my lords with Dr. Ji-Chul Ryu along these lines, this examination program so

critical for me since I needed to know how he educates and how he helps his understudies. That is one of the numerous reasons I am so thankful to have had the chance to deal with such a significant venture.

This undertaking has additionally permitted me to chip away at errands that I intend to do in my future profession. I am intending to proceed to graduate school and become an automated specialist as an expert or a Mechanical architect. Inside these fields, my objectives exist in preparing and advancement, framework controller, and making machines to decrease the exertion of human force. While this may appear to be different on a superficial level, this undertaking covered my inclinations and permitted me to plunge into a portion of the work I am generally inspired by. The whole venture rotated around improving a nonlinear framework. I had the option to separately deal with this program as I searched out thoughts and recommendations to improve the educational plan. One way I did this was by inquiring about various articles about the nonlinear framework. Finding comparable articles isn't the most effortless activity, yet I had the option to discover many genuine models that can be executed into this subject.

Another way I helped work on the project was through my derived dynamic model. When I analyzed several videos and articles regarding the same project, it helped me to understand my model and how I can make it to work. Reading these videos and articles themes based off of them, I was able to bring new ideas and knowledge on what could be used in the project. For example, a lot of articles found it hard to convert nonlinear systems with vision tracking and Dynamixel motors or they didn’t know how to communicate with a servo motor (Dynamixel). Based on my analysis, the project could involve more information on such topics. I also worked with quantitative data from the pre and post-tests. I was able to see what other

articles got right and wrong and consider that when providing my suggestions on what could be improved.

Other than working with the system, I was likewise ready to inquire about and assess an assortment of articles on the nonlinear framework however with various activities. This was extremely fascinating to me in light of the fact that in my future profession, I couldn't want anything more than to improve the nonlinear system. I adopted such a significant number of new things about dynamic and mathematical models that incorporate various kinds of condition, capacity, and that's just the beginning. Dr. Ji-Chul Ryu has additionally been taking a shot at such nonlinear framework which incorporates various types of controllers and mechanical application.

Being a part of this research has done nothing but improve a variety of my skills. I have gained a sense of confidence when working with both nonlinear and programming as I was able to be very hands-on with my work. My problem-solving skills have also improved as I always felt comfortable understanding a system. We met weekly to discuss my progress and upcoming goals and this helped me stay on track. Having the ability to provide feedback on work that was previously done and come up with my own ideas and suggestions on how to improve the project helped me learn how to work freely and creatively. This project has helped me realize how capable I am of working on and improving any project that is given to me through my work ethic.

Overall, while I may have not realized it before, I certainly know now how much of an impact being a part of the student engagement fund has had on me and my academic journey. I am so grateful to have been able to work with Dr. Ji-Chul Ryu, he is an amazing professor who cares so much about his work and his field. He has truly shown me the importance of spreading

knowledge and continuously strive for improvements in your study. their work and their field. They have truly shown me the importance of spreading knowledge and to continuously strive for better trainings to improve the health care field.