SAG Additional Documentation – Reflection
Interactive Robotics Laboratory Project

This semester, the Human Interactive Robotics Lab (HIRo) has gone through leadership changes and the enrollment of incoming first years. But the lab as whole has worked well together through those periods of transitions. Senior members worked with the new members to ideate for projects and provided helps for them through their learning process. Many students came to the Robolab with limited background in programming, not to mention Python and ROS. To help them through that, we had a tutorial phase where the new members learnt about programming while working on robotics projects. With this, they were able to grasp the programming basics relatively quick and complete their first robotic projects in a semester of time.

We also kept the scrum tradition to keep the team up to date. The scrum is a five minutes stand-up meeting every Friday where we report the progress of our individual projects and plans for the coming week. Because many members of the team were working on different projects, this helped the entire team stay together and seek advice from members that were not working on the same project. We will keep this structure in the future as our team expand and work on projects of more diverse topics.

Because the partial funding from student activity grant, we weren't able to fully start on our machine learning projects as we couldn't afford to assemble a powerful enough deep learning server for training efficiently. However, we did use the awarded funding purchase a new robotic gripper. The new 2F-140 adaptive gripper from Robotiq allows us to be more precise at object manipulation tasks and therefore, enable us to pursue more delicate tasks in the future.

Overall, the Human Interactive Robotics Lab had a successful semester. Though we had some difficulty during the project ideation session to come up with novel and well-scoped projects, we eventually managed to complete two projects within this semester and demonstrate them at the Olin EXPO. We look forward to a better semester in the future and sincerely thank the Olin Robolab and Student Activity Grant for the support.