



CAD Marathon

The robot has been designed! This past weekend, members spent over 30 hours designing each of the primary systems on our robot. They then integrated them into one unified design. Currently to the right is a rendering of the current state of the SolidWorks model.

ENGINEERING

This week, members continued working on field construction, completing the lift pegs and the human player station, and began working on the hopper. Also, more tests were done on the gear manipulating mechanism. The mechanism was moved further back from the bumper, and a sliding gate was developed to keep it in the robot. A method was discovered for getting the gear to consistently settle within the robot. In addition, a new version of the blender feeder was constructed to be more robust and usable, using the lessons learned from the original version. The height of the blades was increased and the design of the flap was modified. A gate was added to prevent balls from leaking into the flywheel. Furthermore, the Winch was tested with a practice drivetrain, and it worked well. Several different types of Velcro and Kevlar rope were tested, as well as different drum sizes. Lastly, the prototype shooter was finished and testing began to discover the ideal RPM, flywheel mass, and hood angle.



SOFTWARE ENGINEERING

Members wrote and tested code to read from the two cameras on the same roboRio, and configured them. They also began the code for getting geometric data from the image for the alignment. Math was done for determining a path to travel along to align with the peg *head-on*, and members laid out all the information they needed to get from the frame for the lift image, as this will be essential for the gear auton. Newbies wrote PEGasus1's acquirer and grabber, and learned about Solenoids. Lastly, radios were configured and all roboRios were updated to match the latest version of NI 2017.



MARKETING

Members continued to work on the award submissions for this year, such as the Chairman's Award, Woodie Flowers Award, Entrepreneurship Award, and Dean's List Award. In addition, members completed the logistics of the P.S. 124 Afterschool Robotics Program. Materials were ordered and supplies needed were gathered. Planning also occurred for the Family Workshop, that took place on the 21st. The workshop was a success and we introduced many elementary students to the Lego Mindstorms EV3 kits. Lastly, members continued to take photos and videos for the team, and the general outline and timeline for the Robot Reveal was completed.

CONTACT US!

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IMPORTANT DATES!

Last Day of Build Season 2/21

South Florida Regional 3/1 - 3/5

New York Regional 4/6 - 4/9

St. Louis World Championship 4/26 - 4/30

