



BONDS Week Three Newsletter

January 19-25 2025

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Programming the Vision System

This week, we worked on programming the vision system to successfully identify April tags. Our vision system can estimate camera position relative to the April tags within 2% accuracy.



CAD

After the Preliminary Design Review (PDR) on Monday, we were able to go all hands on deck with CAD. We finalized the chassis dimensions for our robot and found out that the bumpers are a top priority for our robot. Considering the elevator and chute require additional structural support to ensure a strong and functional robot, they are still in progress. Going forward, one of our key focuses will be working on the electrical aspects of our robot.



Prototyping the Climber

As we worked on the CAD for the robot, we realized the original plan for the climb aspect would not have worked because of chassis space. After some reconsideration, we are happy with how the prototyping went! Once the CAD is complete, we need to do calculations for our center of gravity to ensure the robot can climb successfully onto the cage.



PDR

As a part of the Preliminary Design Review, we had the opportunity to hear from professionals and alumni. We gave them a presentation regarding our ideas and plans, and we received feedback on the designs, our presentation, and the project status overall. They advised us to make goals specific, measurable, achievable, and time-bound (SMART). We believe using SMART goals will be essential to our team this year because we want to have a metric to evaluate whether or not we met the goal. We were additionally advised that testing the climber is a vital step in our strategy. Lastly, they left us with a philosophical question to ponder: Is it better to be the best scorer or a really good teammate? We are thankful to have the help of professionals and alumni and appreciate the advice we received!

We want to give a big thank you to all of our sponsors! Our team can compete because of your support, and none of this would be possible without our sponsor's help. Our team, BONDS, will keep improving and continue learning STEM skills and values this season.

To see our season's progress, please follow us on Instagram, Youtube, Tiktok, and our official website for weekly newsletters.

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