Dead Robot Society (0006)
Greater DC/Virginia

Period One - Project Plan

Goals and Tasks for Botball 2019

Game Goals and Tasks

1. Meet as a team to discuss the game rules and score sheet - **1/24/19**
    a. Determine a date and time to meet that is convenient for a majority of the team members and adult mentors - **1/20/19**
    b. Familiarize senior team members with the game board rules so they can lead discussion and answer questions - **1/22/19**
2. Decide on scoring strategy that will be used in competition - **1/26/19**
    a. List any and all possible scoring strategies and narrow them down to the ones team members find the most effective and efficient - **1/24/19**
    b. Break each robot's 2 minute runtime into 15 second intervals to decide exactly what each robot will do in each of its 15 second intervals - **1/26/19**
3. Monitor and post on the KIPR FAQ page to make sure we have the most updated game information - **2/15/19**
    a. Assign a team member to monitor the FAQ page for any useful or relevant information - **1/25/19**
    b. Assign students to write and proofread any questions we post on the FAQ to make sure they can be easily understood - **1/25/19**

Robot Building Goals and Tasks

1. Build a LEGO robot to score the gas valve- **2/1/19**
    a. Design and assemble a LEGO claw to grab and remove the gas valve from its starting position - **1/29/19**
    b. Design the claw to rotate in order to score the gas valve on the PVC - **1/29/19**
2. Determine if sorting and scoring injured and non-injured people is attainable/efficient use of time - **2/5/19**
    a. Prototype several claws to pick up people - **2/1/19**
    b. Test the various designs and find what is most effective, then decide if the points scored are worthwhile - **2/1/19**
3. Build Create robot with an arm and claw capable of grabbing Botguy and the Mayor from the top of skyscrapers - **2/15/19**

    a. Create a prototype arm that reaches up to the highest skyscraper - **1/29/19**
    b. Build a claw that is capable of grabbing Botguy, the Mayor, and the large water container - **2/12/19**

Programming Goals and Tasks

1. Develop initial sensor code, logic, and driving functions to be used throughout the season - **2/6/19**
    a. Create camera code that can determine which buildings are on fire from the starting box - **1/28/19**
    b. Develop smoother, more efficient line follow code to be used to follow black tape lines - **2/1/19**
    c. Implement more accurate driving functions for both LEGO and Create robots using the Wallaby Gyro - **2/6/19**
2. Code each robot to perform planned tasks - **3/10/19**
    a. Program Create arm movements for retrieval and placement on skyscrapers - **2/20/19**
    b. Program LEGO servo movements to transport firemen to the medical center - **2/24/19**
3. Work on robot choreography and code finalization - **3/28/19**
    a. Develop procedure to have Create robot signal LEGO robot which medical center is burning - **3/4/19**
    b. Add appropriate pauses to prevent robots colliding on their way out of the start box - **3/10/19**

Documentation Goals and Tasks

1. Submit first period documentation - **1/30/19**
    a. Decide who will work on each part of the documentation - **1/20/19**
    b. Work with senior members of the team to make sure all goals and deadlines are realistic - **1/28/19**
2. Submit second period documentation - **2/27/19**
    a. Create Github repositories for each robot - **2/1/19**
    b. Decide what part of our code to use for the documentation - **2/20/19**
    c. Decide which part of the robot to use for the mechanical aspect of the documentation - **2/20/19**
3. Submit third period documentation - **4/3/19**
    a. Talk with team members to gather data about what they have learned and gained from Botball - **3/25/19**

b. Keep and update a list of everybody who has taken and still needs to take the survey - **4/1/19**

Schedule Conflicts

1. Martin Luther King Jr. 3 day weekend - **1/19/19 - 1/21/19**
2. Fairfax County Public schools end of semester 4 day weekend - **1/24/19 - 1/27/19**
3. Presidents day 3 day weekend - **2/16/19 - 2/18/19**

Team Organization

Schedule of meeting times

Regional workshop - January 19th and 20th

Students will work on the robots every Wednesday to Friday 7:00 pm - 9:30 pm and Saturday to Sunday 1:00 pm - 5:00 pm.

Regional tournament - April 6th

Division of Labor

Student Team Leader - Charlie Clyne

Software Team Leader - AJ Arnolie

Software team members:

- Ella Grasmeder
- Meghna Sharma
- Lexie Perez
- Kat Kosolapova
- Evalynn Bogusz
- Christi Whitehead

Software members will work on programming both the LEGO and Create robots.

Hardware Team Leader - Will Bogusz

Hardware team members:

- Avery Perez
- Caitlyn Shumadine
- Tyler Southworth
- Bela Patel
- Liam Toole

- Danny Grasmeder

Hardware members will work on building both the LEGO and Create robots.

Conflict Resolution

If team members enter any sort of conflict with each other it will be handled in the following way

1. The two team members will calmly talk out the problem they are having and try to resolve the issue themselves.
2. If this does not work the student team leader will be brought in to help them discuss and resolve their issue.
3. If this still does not work an adult mentor will discuss the issue with all of the students involved and suggest possible courses of action to the student team leader. The student team leader will then make a decision and whatever the student team leader decides will be final.