Robot Builders Night Virtual for March 3rd, 2026

https://www.youtube.com/watch?v=G4BbCkL76Lk

Housekeeping

Upcoming Competitions

- The group discussed upcoming competitions scheduled for the weekend of May 24th, featuring events such as advanced barrel racing and sumo robotics at the Dallas Maker Space. International participants also plan to join remotely with parallel contests.

Robie Robot Rebuild

- Mark R. provided an update on the club's Robie robot rebuild, focusing on redesigning the power supply with a new power distribution board. The project also involves preserving the robot's existing structure, which uses a unique wooden and fishing line mechanism.

Project Presentations

1. **Philip Foster's Two-Wheeled Robot**
    - Philip Foster presented his two-wheeled robot project, detailing its mechanical design and future AI image processing capabilities using a Raspberry Pi 3. He also discussed the challenges of ROS2 integration and the use of Modius R4 board for motor control. Black star ★
2. **Tom Crawford's Outdoor Robot**
    - Tom discussed his outdoor robot using vintage screwdriver motors and 3D printed parts. He faced challenges with wheel alignment and explored using optical pattern tracking for feedback, sharing humorous insights from using Google's Gemini AI tool for pattern generation.
3. **Mark Dombrowski's Dual Time of Flight Sensor**
    - Mark D. presented his dual time of flight sensor project aimed at creating a low-cost scanning LiDAR system. With Raspberry Pi Pico at its core, the setup can articulate for enhanced range detection.
4. **Ray Casler's Rectangular Path Robot**

    - Ray showcased his robot navigating a rectangular path using distance sensors for wall tracking. Although the setup is simple with no odometry, it effectively demonstrates the basics of autonomous movement. Gold star ⭐

Filament and 3D Printing Discussion

- Participants shared experiences maintaining filament integrity, discussing issues related to moisture and storage. Suggestions included using desiccants and heated drying techniques for filament preservation.

Robotics Tools and Techniques

- The group exchanged ideas on using IMUs for orientation maintenance and incorporating heading control for more precise autonomous navigation.

Conclusions and Insights

- The meeting highlighted the importance of innovative problem-solving and collaboration among robotics enthusiasts. Continual sharing of both successes and challenges fosters an environment of learning and improvement within the group.

Referenced Links

- Mark R. provided the following link related to quadruped robot projects:
    - Building a Little Quadruped Robot

Acknowledgments

- Thank you to all members who contributed their time and expertise. Special recognition to Philip Foster for receiving a "Black Star" for significant robotic progress and to Ray Casler for earning a "Gold Star" for autonomous robot demonstration.