Robot Builders Night Virtual for February 3rd, 2026

https://www.youtube.com/watch?v=GljK-ck5ogU

Main Discussion Points

Robot Development and Sensor Integration

- **Mike Williamson** provided an update on his robot project:
    - Discussed upgrades on a robot featuring servos, a motor controller, various sensors, and a Raspberry Pi for computing tasks.
    - Shared advancements in lidar usage for localization and obstacle detection.
    - Experimented with using Pixie as a package management tool to run RViz on Windows, enhancing cross-platform functionality.
- **Mark Dombrowski** presented his work on cycloidal drives and 3D-printed bearings:
    - Explained the compact design and functionality of cycloidal drives.
    - Demonstrated a self-designed 3D-printed bearing, using airsoft BBs for the ball bearings.
    - Discussed future plans to test with tougher filaments and integrate into projects.

AI and Programming Tools

- AI tools such as Claude AI and GitHub Copilot were discussed for their effectiveness in assisting code development.
    - **Ray Casler** shared using AI-generated code for sensor integration and problem-solving.
    - Challenges included generating code that compiles correctly and working through limitations of free AI services.
    - Participants debated the efficacy of different AI models and the cost-to-benefit ratio of paid vs. free accounts.

Robotics Competitions and Demonstrations

- **Iron Reign** presented a demonstration of an autonomous robot designed for competitive activities, highlighting its capabilities in completing tasks and goals autonomously and in teleoperated modes.

Conclusions and Insights

- Integrating AI tools into robotics projects has the potential to significantly increase productivity and innovation, though it requires navigating limitations and understanding contextual requirements.
- Participants are actively experimenting with cross-platform tools and methods to enhance their robotics endeavors.
- Engagement in robotics competitions spurs innovative approaches to problem-solving and inspires iterative improvements in design and functionality.

Referenced Links

- Mike Williamson shared a link related to using Pixie for ROS2 tutorials:
    - ROS2 Tutorial with Pixie
- Pat Caron shared a link to Claude AI:
    - Claude AI

This meeting exemplified the community's dedication to advancing robotics through collaboration, experimentation, and the strategic use of new technologies and tools.