

Robot Builders Night Virtual for August 18th, 2026

https://www.youtube.com/watch?v=Ohr9Rlv9y_0&pp=0gcJCRMMAYcqIYzv

Key Discussion Points

- **Robo Columbus 2026 is AppAI_Sroaching:** Our annual Robo Columbus competition is roughly three months away and is scheduled to align with our Saturday monthly meeting in November. Members should begin preparing their robots.
- **The Hackerbot Challenge is This Saturday!** We finalized the logistics for our upcoming in-person Saturday meeting at the Maker Space. Four teams will compete under tight time constraints to build a robot designed to accomplish a surprise, undisclosed goal. The organizers will provide motors and basic raw materials like popsicle sticks and hot glue. Using a microcontroller is optional but awards extra points, so if you plan to use one, please bring your laptop, USB cables, hand tools, and soldering irons.
- **Lena Robot 2 Upgrades:** A presenter shared several key hardware updates, including support for an inertial measurement unit (IMU), ultrasonic range sensors, and potential dividers or sensors for battery voltage monitoring. Teleoperation is now incredibly smooth thanks to newly installed quadrature encoders, which increased resolution to 1,400 ticks per wheel revolution from the previous 70 ticks.
- **Advanced Navigation via Fusion Core:** We explored "Fusion Core," a specialized software module that fuses sensor data from wheel odometry, GPS, and IMUs. The module handles sensor noise through outlier gating, features adaptive noise estimation to eliminate manual filter tuning, and uses "gated coasting" to handle temporary GPS loss (such as in tunnels). We also discussed moving to Foxglove for visualization to better handle Quality of Service issues.
- **Mechanical Watch Calibration:** In a fun electromechanical detour, a member shared how to use "timegraphers"—acoustic timing devices—and modern smartphone apps to calibrate mechanical wristwatches and vintage dashboard clocks without resorting to quartz replacements. The group discussed the intricate mechanics of these timepieces, including jewel bearings and balance springs.

Referenced Links

- **Karim Virani provided the following links:**
 - [Timerity Timegrapher on Google Play](#) - A tool for time graphing.
 - [YouTube Video](#) - A relevant video shared for additional insights.