Rules and Regulations

- Fully Autonomous
- 20cm x 20cm Footprint - No Height Limit
- Weight Limit 3000g
- Edges With Radius ≥ 0.005"
- 3x5 Card Cannot Stick to Wheels ≤2s
- Dropped Parts Cannot be ≥ 5g

The Match!

- Each Match has 3 Rounds
- Each Round is 1 minute
- The Battleground is called a Dohyo
- The Dohyo has a 154cm Diameter Ring the Robots Want to Remain in
- The Winner is the Last Robot Standing in the Ring

Inside the Sumobot

- 99:1 Metal Gearmotor (25Dx54L mm HP 12V 29kgcm)
- ArduPro Robot Controller (With Arduino Nano)
- Cyton Motor Driver 30Amp 7V-35V DC 2 Channels SmartDriveDou
- JS200XF Infrared Long Range Sensor
- QTR1A Contrast Sensor
- Chassis Made Out of ABS Plastic

Controller with Arduino Nano

Motor Controller

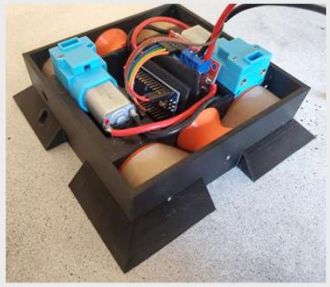
Contrast Sensor

Long Range Sensor

Oregon State University

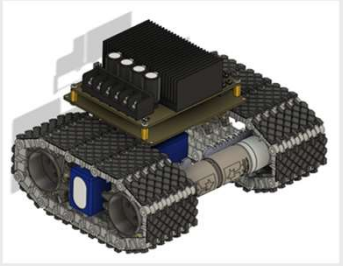
READY...SET...SUMOBOT!

What is Sumobot? Two robots compete head-to-head in a sumo style wrestling match



First Prototype

First Motor for Final Robot



CAD Model of Final Robot

Motor Inside Final Robot

Motor Comparison

First Motor: Symtec Q Gearmotor (12V 1450RPM 9.28:1 44kgcm) x2
Combined Weight: 1280g
Verdict: Too Heavy

Final Motor: 99:1 Metal Gearmotor (25Dx54L mm HP 12V 29kgcm) x4
Combined Weight: 364g
Verdict: Just Right

Team Roles

Quinn Farquharson: Test Engineer

Tilford Li: Software Engineer

Grace Myers: Logistics and Financial Manager

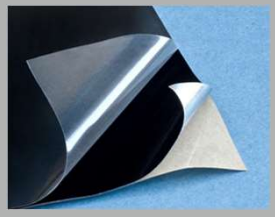
Jon Weiser: Manufacturing Engineer

From Left to Right: Jon Weiser, Tilford Li, Quinn Farquharson, Grace Myers

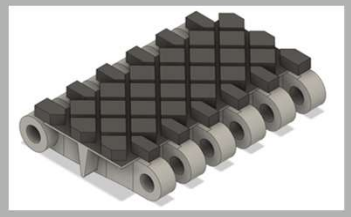
We Are Bazingabots

Unique Solutions

- IR Absorbing Stickers to be Invisible to the Other Team's Robots
- Tracks for More Ground Friction
- Low Ground Clearance to Prevent Other Team's Robots to Get Under Ours



IR Absorbing Stickers Provided by Edmund Optics



Lynxmotion Track

Sponsors and Stakeholders

- The Dalles Area Chamber of Commerce
- Edmund Optics
- OSU College of Engineering

THE DALLES AREA CHAMBER OF COMMERCE

Edmund 80 YEARS OF OPTICS