

# Team 1481 The Riveters

## Chassis:

- Solid bolted and riveted Versa Frame
- 4 Swerve Drive Modules made by Swerve Drive Specialties
- 13.6 fps, powered by 8 Falcon 500 motors
- 4" VersaWheel DT Diameter wheels
- Wheel COF 1.0 (published) -Druometer 77a

## Over the Bumper Ball Intake:

- 1/4" polycarbonate construction
- 2" Intake Wheels (Compliant)
- Powered by 2 775 motors with 10:1 Versa Planetary gearboxes

## Shooter

- 1/4" polycarbonate construction
- 1:1 direct drive 4" Stealth Wheel with a Swerve Drive Specialties 1.54 lbs Flywheel
- Powered by one Neo motor

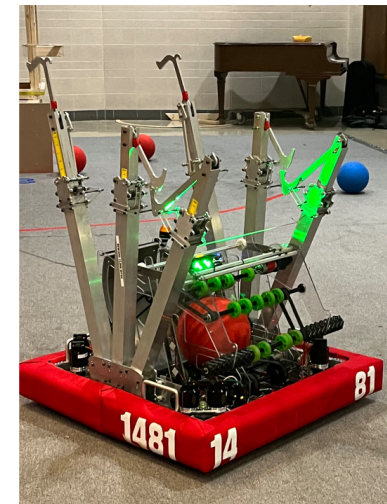
## Climb

- 3 independent 2 hook hoists with 21.5" maximum lift, pulled down by rope and extended by constant force springs
- 1" Pitch diameter hoist drums powered by 3 70:1 Versa Planetary dual stage gearboxes
- All 3 hoists are choreograph controlled by Talon SRX MotionMagic with Rev Robotics through bore encoders
- All hooks are spring loaded with catch release to speed climb and counter act the constant force springs
- Dedicated hoist camera for drive on and climb stage verification

## Control Systems

- Limelight camera for shot aiming
- Climb uses Motion Magic
- Coded in Java
- PIGEON IMU Pitch Trigger for climb

Robot Name: Fluffy  
Weight: 123.0 lbs.



# Capabilities

## Autonomous Capabilities:

- ✓ Drive forward
- ✓ Shoot cargo

## Teleoperated

### ✓ Capabilities:

- ✓ Floor pickup
- ✓ Lower hub
- ✓ Upper hub
- ✓ 6 point climb
- ✓ 10 point climb
- ✓ 15 point climb

### Statistics:

9 Cargo during Teleop



# FRC

FIRST® Robotics Competition

2020 Chairman's  
Award

(Southfield District)

2019 Jackson  
District Winner

2017 Woodhaven  
District Winner

FRC Team 1481, The Riveters, is based in Farmington Hills. The team has been running since 2014 and is a student-led, all girls team. We encourage STEM in our school by establishing multiple AP Computer Science classes, Engineering classes and more in collaboration with Lawrence Tech, for dual-enrollment. We participate in outreach events with local FTC teams to inspire the next generation of innovators.