Driving All Day, Driving All Night

Warrior Racing has been taking advantage of the beautiful fall weather by taking RW-8 out on the course every weekend. The team has also been able to join up with other SAE teams at local events and friendly competitions. The amount of data that has been collected in the past month is staggering. Each time the car is driven our members push each subsystem to its limits. We’re happy to say the car has only experienced one major issue in over 100+ hours of driving, and that was a failing component on one of the rear wheel hubs. With RW-8 running smoothly and consistently, each team member has been able to get some practice in behind the wheel. Now more personal thoughts of driver’s preference are being thrown into the design mix. “This made it tricky to drive, this felt good, what if we replaced this with this, why do we have it respond like that, etc., etc.” Some of the driving skills of our younger members took us by surprise, handling the car very well for their first time. Just like the design process, driving is a learning experience.

The Michigan winter is quickly approaching, but we’re going to keep testing until we get that 10 feet of snow. And as we pass our first design freeze check point, Warrior Racing is quite pleased with the progress we made so far. Winter may put a hold on driving RV8, but that’s the time we’ll be manufacturing our 9th Road Warrior!
Oakland University Drive Day

On October 4th Grizzlies Racing hosted a drive day at their beautiful campus in Auburn Hills. Oakland’s team planned a great event. From the food, to the engineering discussions, to the actual racing, Warrior Racing had a great time! At competitions you have the opportunity to check out the unique designs of other teams, but events like this you can really break it down to each component. Multiple cars were available for testing and discussion, so individuals could really take a good look and compare the different designs. Even though our teams have a very detailed book of rules and regulations to follow, its mind blowing to see the differences in design and manufacturing. But that’s what Formula SAE is about. Learning new things with creative and unique designs.

Check out the Grizzlies on Facebook www.facebook.com/GrizzliesRacing

Check out Kettering SAE on Facebook www.facebook.com/KetteringFSAE
LTU extended an invitation to all local SAE teams to compete in a mini Grand Prix autocross event. The University of Michigan, The University of Toledo, and Wayne State accepted the challenge. On October 11th we drove down to Lawrence Tech’s campus, excited to compete against the other teams. We prepped RW-8 while our top driver, Mohammed Kakli, suited up for the race. RW-8 handled the autocross track well, breezing through the slalom and getting around the hairpin turns. Unfortunately a few of the other teams had some difficulties and needed to remove themselves from the race. But at the end of the day, we had a great time at this friendly competition event. As always it was a learning experience, about our own program and others. Now we’re really craving to race at Michigan 2015!
**Formula SAE Warrior Racing Members**

The following individuals have completed a series of introductory assignments and actively participated in the program, resulting in full time membership with Warrior Racing.

---

**Siddarth Patel**  
*Powertrain - Induction*

Sid is a Mechanical Engineering student who was the first individual to earn full time membership with Warrior Racing. He studied induction systems and focused his interests on the intake. For his final project he researched and designed a new intake in CAD. Moving forward he plans to improve upon his designs and research other components to create optimal air flow to the engine.

---

**Hunter Hollister**  
*Chassis - Ergonomics*

Hunter is pursuing her degree in Criminal Justice but has had an interest in automotive systems since the day she was born. She earned her full time membership by studying the ergonomics systems and by fabricating a jack / push bar hybrid that will work on the entire Road Warrior series. Hunter is now working on improving the steering wheel designs and seat inserts for different sized drivers.

---

**Madison Horsch**  
*Chassis - Suspension*

Maddy is studying Mechanical Engineering and is the second Horsch to join Warrior Racing. Her projects focused on the renovation and rebuild of our previous car, RW-6. She reassembled the suspension and got RW-6 back on its wheels. Now, in addition to making quick repairs to RW-8’s suspension, she’s working on improving the RW-8’s steering column.

---

**Scott Forbis**  
*Business - Resources*

Scott Forbis is a Business major and has been helping out Warrior Racing over the past year. This season he took the plunge and pursued full time membership. Through his devotion to obtain and improve sponsor relations, he earned his spot on the team. As Scott moves forward in the season, he plans to continue managing potential sponsorships and begin working on the cost report.
Soizic Guillot  
**Business - Communications**  
Soizic is pursuing her Masters in Economics and has contributed her skill set to the team. To earn her membership she helped expand the audience that Warrior Racing reaches and worked on obtaining additional sponsorships. Now her focus is to take over the new Warrior Racing website, getting the most out of the valuable resource by effectively updating the layout and content.

Gursevak Matharu  
**Chassis - Suspension**  
G is a Mechanical Engineering student and the second Matharu to join Warrior Racing. His assignments were focused on the ergonomics system, developing a user friendly and efficient shifter. The final design is robust and effective, and will serve Warrior Racing over the next few years. G has shifted gears now, devoting his time and skills to the challenging suspension system.

Samer Allomary  
**Powertrain - Cooling**  
Samer is studying Mechanical Engineering and expressed his interest in powertrain systems since his first day. He became a part of the cooling sub-system, learning about the various components. Samer designed and assisted in the manufacturing of a swirl pot for RW-7. Now, with some manufacturing skills under his belt, he will be rebuilding the rest of RW-7’s cooling system.

Pratik Kamal  
**Chassis - Brakes**  
Pratik is pursuing his Masters in Mechanical Engineering. He designed a brake pedal and tested its properties under a wide range of conditions. Part of the design goals was to make it ergonomically friendly, and he made sure to incorporate the opinion of the driver. After completing a detail analysis and report of the pedal, Pratik now will be assisting the Brakes Captain in future designs.
“Getting Banged” at Whirllyball

Warrior Racing teamed up with Just Walk It, an American Cancer Society Relay Team, to raise money for the two great organizations. Friends, family, and supporters from all around joined us for a memorable night of friendly Whirlyball competition. Congratulations to the winning team, “Team Cone,” going 3 - 0 with high scoring games. Mohammed Kakli, Steven Sute, Rebecca Thornhill, and Scott & Ariel Mclaren led “Team Cone” through those victorious matches. The event wouldn’t have been a success without the support of the Bekker and Le Page family who donated the raffle prizes! In addition Warrior Racing’s sponsor EmbroidMe provided awesome shirts for the winning team, and our new supporter “The Whisky Sisters” brought a variety of delicious desserts. Thanks to everyone who came out to make the event a success!

Detroit News

The Detroit News wrote an article to promote Formula SAE students in the industry. Warrior Racing was ecstatic to be a part of it. Check it out by clicking on the this link!

www.detroitnews.com/story/business/autos/2014/10/12/sae-students-careers-competition/17119073
After spending his summer as a mass strategist intern at General Motor in 2013, Mahesh Umasankar followed the recommendation of his manager to join the Formula SAE team at Wayne State University. He knew that he would learn a lot from this experience and that becoming a member of the team would help him in his future career.

Last week Mahesh, now the suspension captain, took a minute to sit down with me and to look back on his experience with the Warrior Racing team on the suspension system.

**Why did you choose the suspension subsystem?**
“When I first joined the Warrior Racing team, I was not really familiar with the organization. I did not know a lot about engines so I did not want to jump into it right away, it was intimidating. In addition, a lot of people were already working on Powertrain. So I knew I could have a big role within the suspension department and learn a lot from it. I did not expect it to be as hard but there is a lot involved into it. Today, I really enjoy working on it.”

**What lessons were learned about the suspension subsystem from last season?**
“The brake test at competition consists of accelerating to top speeds and breaking hard to stop the car. It puts a lot of forces on the suspension, and some of the components ended up breaking. This is part of the reason why they gave way. The other reason is basically because during manufacture we made these components with the wrong material. They were designed properly but were not manufactured and assembled correctly. We are going to make sure that this year, this will not happen.”

**What is your objective for this year?**
“I want to help the team overall to do well at this year’s competition. I want to design a suspension and steering system that allows us to do well in competition. To give you a better idea, our car needs steering improvements. It needs to be easy to steer and controllable for the driver. The car has to stick to the ground instead of sliding all over the place. It has to be able to transmit the forces properly through the suspensions because on this car not everything is in line, which causes a lot of bending. I want to help making a structurally good car, easy to drive and without skidding.”
Drive Away Hunger Game Night Success!
Warrior Racing partnered with Gleaners Community Food Bank and DOEnation Ministries to help in the fight to end hunger. Members, friends, and family joined together to raise money and collect food for these local organizations. After an introductory speech by DOEnation’s co-founder, James Miller, the festivities began.

Games of all form and fashion were played throughout the night. Modern first person shooters, Monopoly, Cards Against Humanity, etc. One of the highlight tournaments was classic Mario Kart. The competition was fierce but Fabio Mendonca dominated his rivals to earn a first place finish. Justin Bekker took second, and Michael Warmbold took third.

Next FIFA 2014 was put on the big screen and pairs of individuals battle against each other to be the best futbol player. Scott Forbis and Pratik Kamal Won the final match 1-0 in the 88th minute, sealing their victory over Justin Bekker and Fabio Mendonca.

At the end of the night Warrior Racing raised enough money to make a substantial donation to DOEnation Ministries. The team also brought in over 100 pounds of food, providing an estimated 85 meals to families in the greater Detroit area.

This event wouldn’t have been as much of a success without the support of two awesome companies, Blimpies (of WSU’s campus) and Schokald of Birmingham.

Christmas Bake Sale
December 3rd in CoE lobby
12:00 - 4:00
Lemon squares, hot chocolate, sugar cookies, gingerbread, and other seasonal favorites.
Plenty of awesome raffle prizes!

Kart 2 Kart Christmas Party
December 28th at 5:00
Plenty of food, racing, and raffles.
Price - TBD
Endurance race slots are still open, email adam.niner@wayne.edu to learn more.

Valentines Day Bake Sale
February 11th in CoE lobby
12:00 - 4:00
Featuring Warrior Racing’s legendary Apple Pie along with other seasonal favorites.
Plenty of awesome raffle prizes!
Kart 2 Kart has supported Warrior Racing in multiple ways. They provided awesome prizes, discounts, and assistance with event planning. If you love racing, be sure to check out Kart 2 Kart in Sterling Heights!

Our current sponsor EmbroidMe provided us with discounted apparel for the upcoming winter season. They were also very generous and sponsored our Whirlyball event with the American Cancer Society by providing T-Shirts for the winning team. Thanks EmbroidMe!
Walbro sponsored our team by providing us with fuel pumps and fuel filters. They have been helping out our team for the last few years by sponsoring us with a wide variety of Powertrain components. Thanks for the support Walbro!

We've had a lot of great local businesses and organizations support us this past month. Blimpie's (on WSU's campus) and Schakolad of Birmingham supported our team by providing goods for our Hunger Drive / Game Night. Applications 3D is a company that provides quality 3D imaging and they made a contributed to the funds of Warrior Racing. Finally the Whisky Sisters of Wyandotte supplied a wide range of baked goods for our Whirlyball fundraiser with the American Cancer Society.

We're grateful for all of the donations and support given by these organizations! Be sure to check them out!
Our team’s success is made possible through the generous donations and support from the following companies. Without them our team would not have the resources needed to provide invaluable hands-on experience and to manufacture our formula cars. From all members of our team, thank you Warrior Racing sponsors!
Wayne State

Woodward

Special Thanks

Brian Geraghty
Dr. Michele Grimm
Dr. Marcis Jansons
Andrew Murrell
Phil Hughes
Carl Occhialini

Michael Royce
Suzanne Royce
Sanket Sirpotdar
Jim Vito
Angela Childrey
The Niner Family

Contact Information & Media Sites

5050 Anthony Wayne Drive
Suite 1530
Detroit, MI 48202
Office Phone - 313.577.3829
Website - fsa.eeng.wayne.edu
Facebook - facebook.com/WSUWarriorRacing
YouTube - youtube.com/wsuwarriorracing
President Kristina Vujic
kvujic@wayne.edu
Business Director Adam Niner
adam.niner@wayne.edu