

**BUILT BY PASSION**



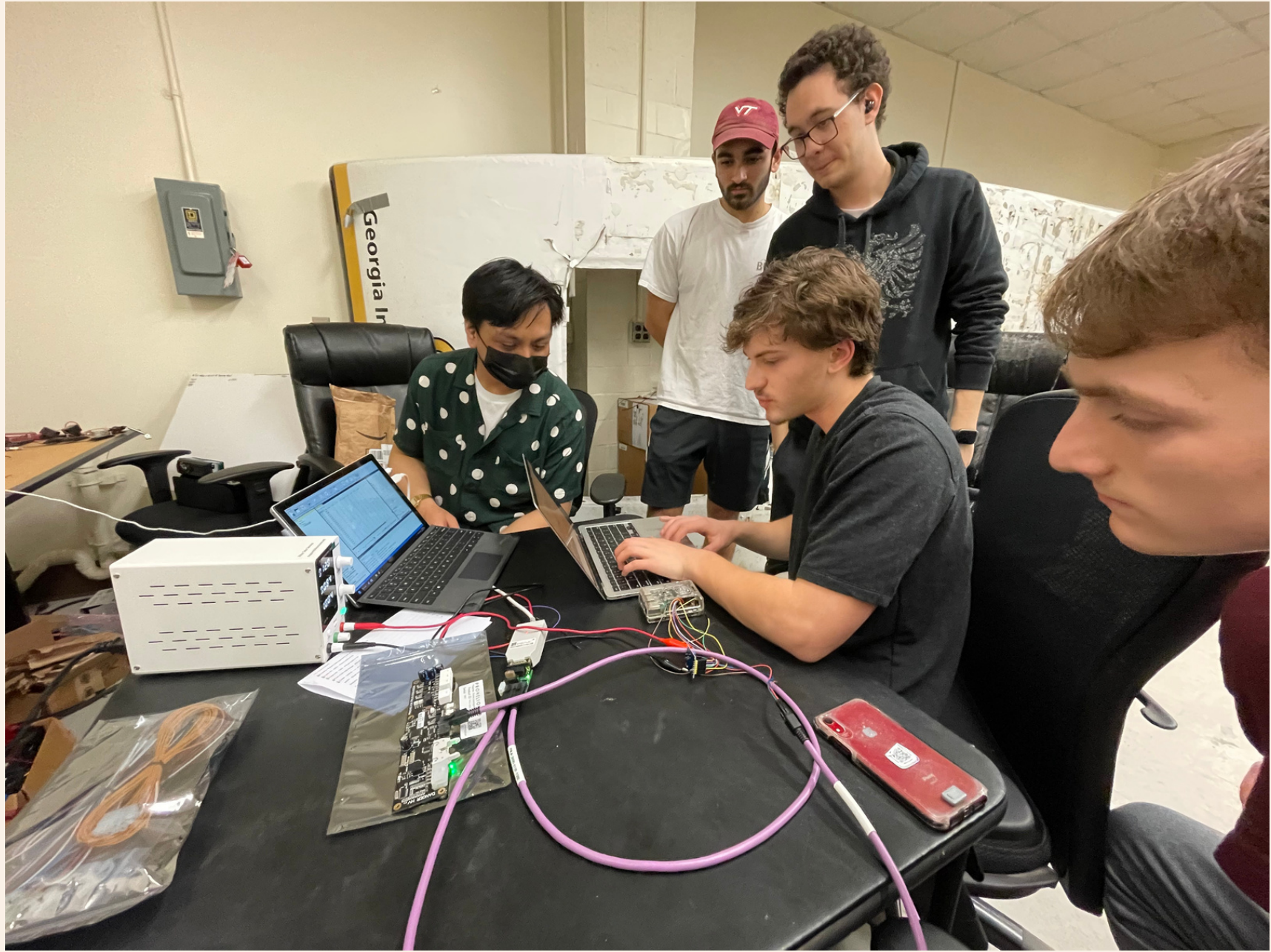
**DRIVEN BY A DREAM**



**SPONSORSHIP PACKET**



# OUR TEAM



## About Us

SolarCar at Virginia Tech is a team of 50+ students that aims to design and build solar-powered vehicles to compete against other university teams at the American Solar Challenge, a bi-annual national engineering competition. Founded by Eashan Gupta in 2021, a then-sophomore at Virginia Tech, this new iteration of Virginia Tech's 1990s solar car team was officially formed in October 2021. Currently, the team consists of 50+ members, is advised by Dr. Saied Taheri of the Center for Tire Research (CenTire), and operates out of lab space in Virginia Tech's Randolph Hall.





# OUR MISSION & VALUES

## TEAMWORK



## GROWTH

## OPPORTUNITY

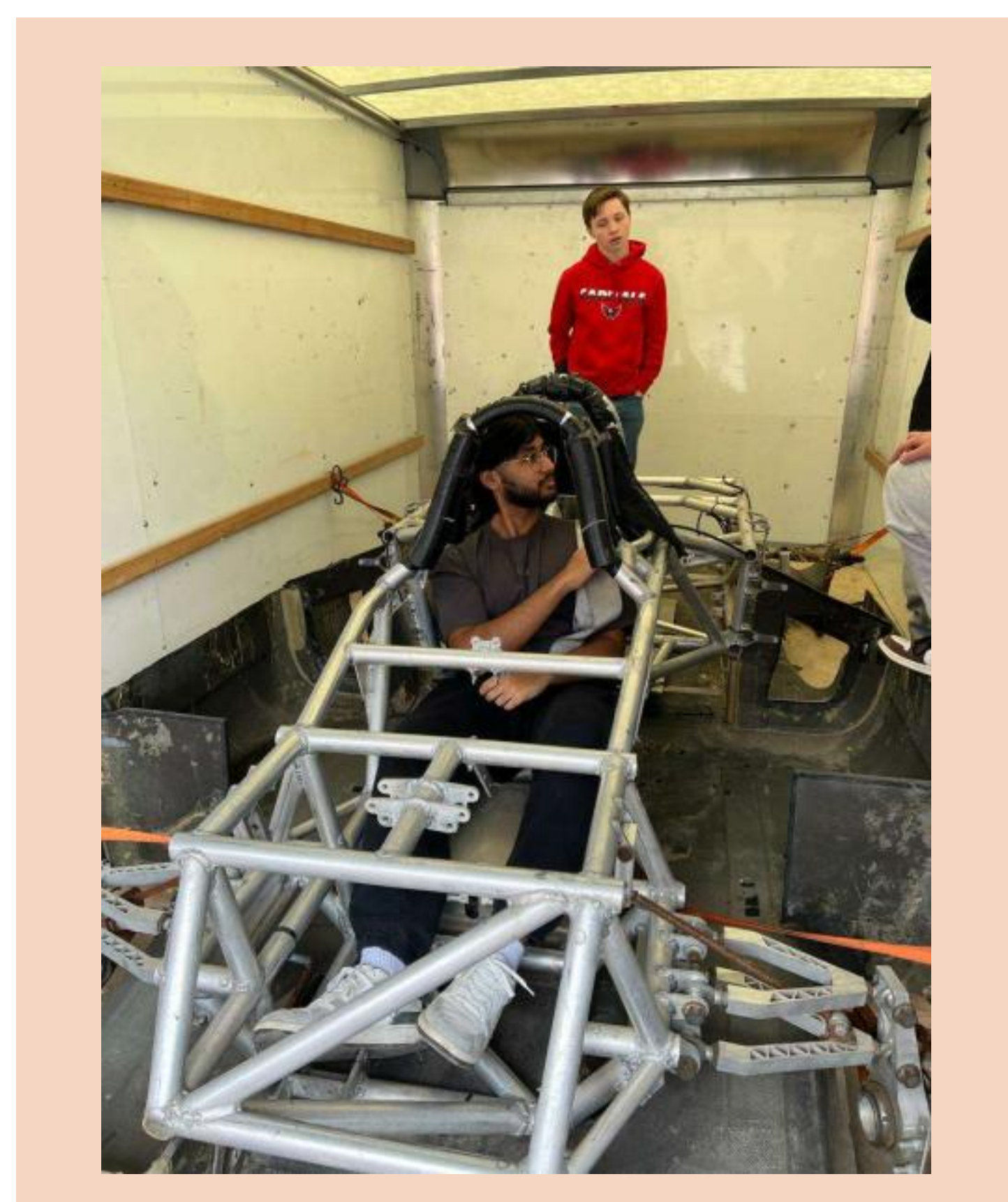
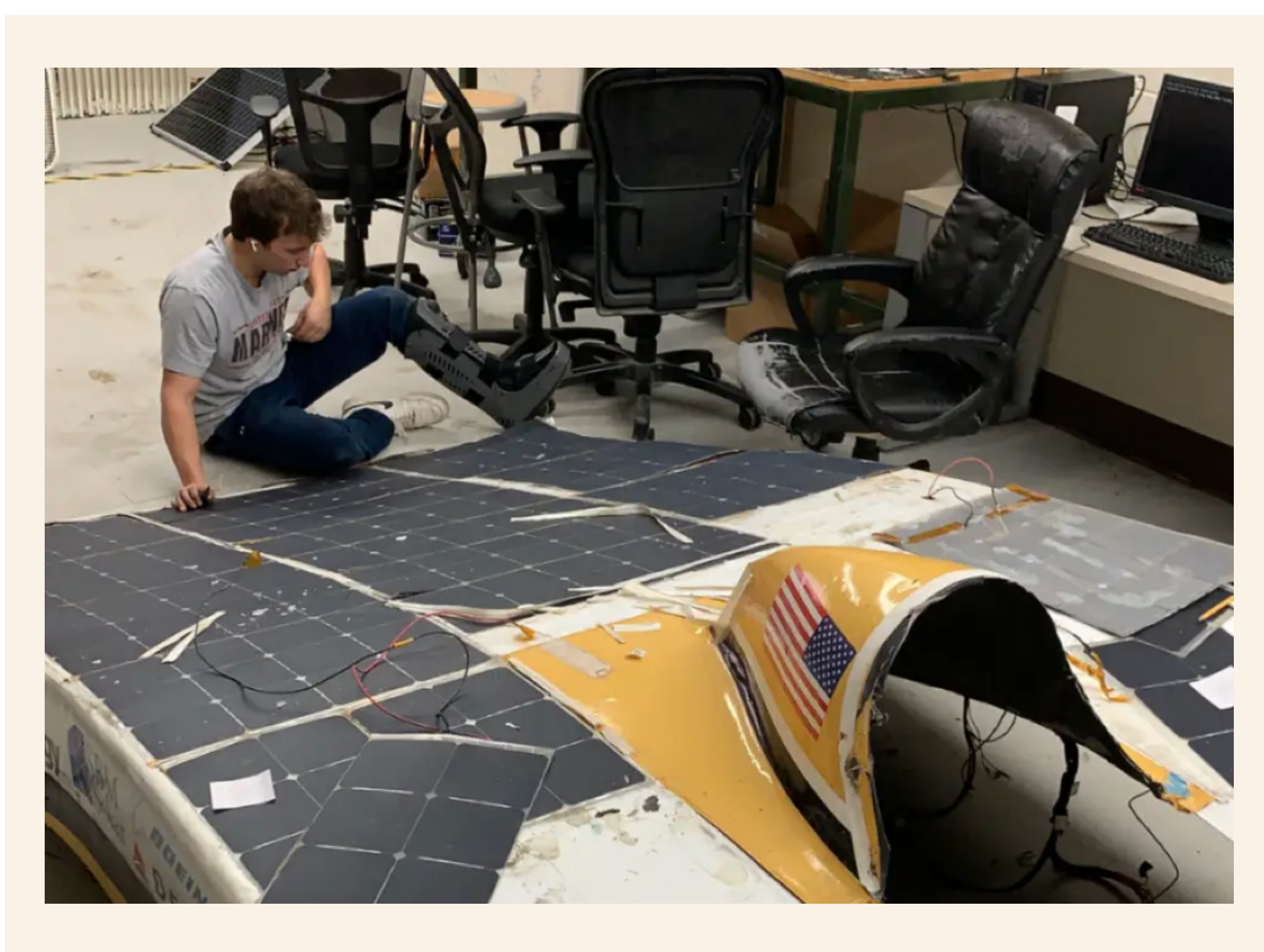
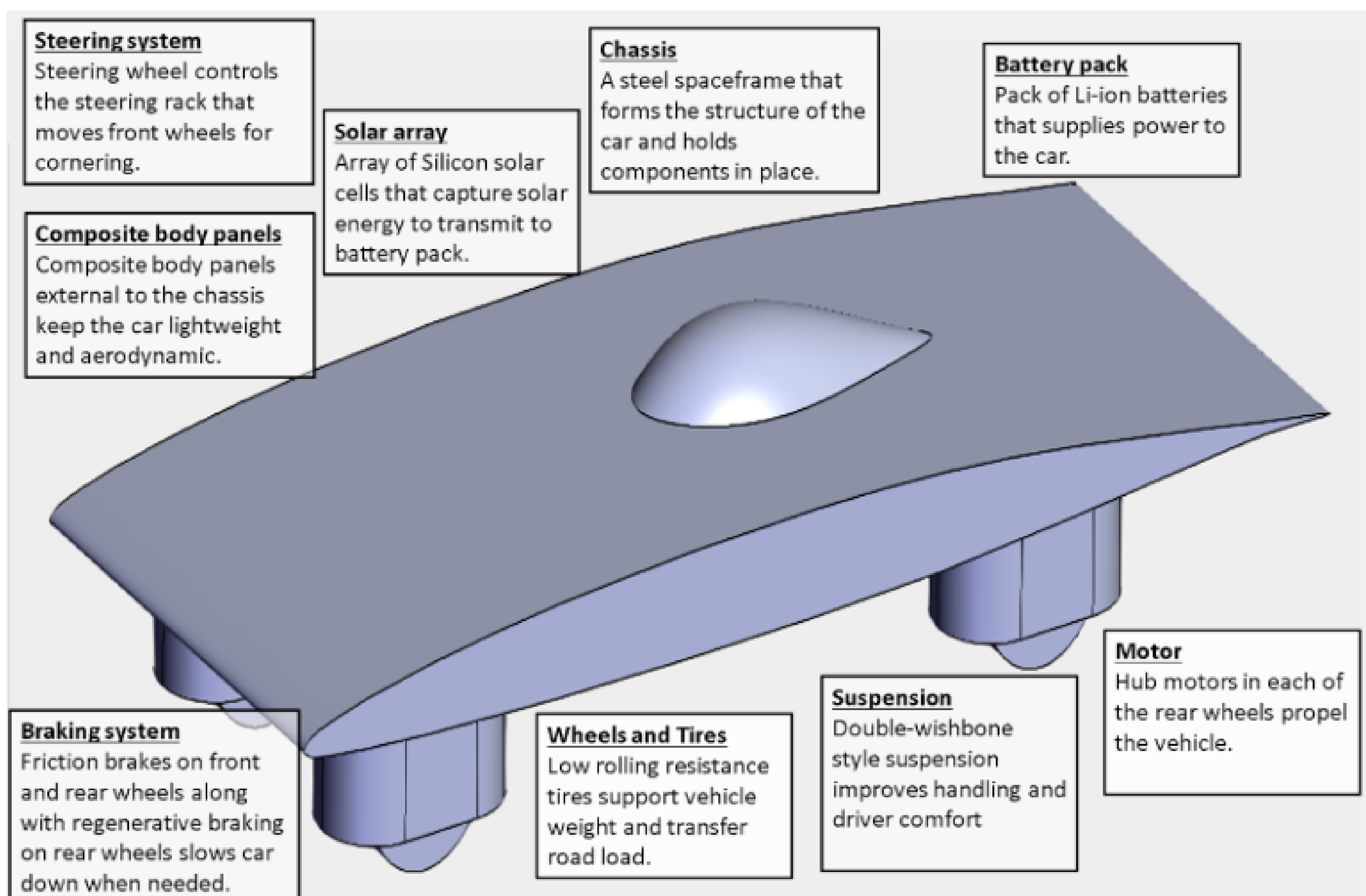
SolarCar at Virginia Tech is more than just a team of engineering students working towards a common goal. We work with all grade levels to foster a professional learning and building environment and to allow an experience to help build teamwork skills. We provide students with opportunities to take on responsibility, learn design concepts through working with others, and develop the skills necessary for leadership. We aim to continue as an established multidisciplinary team that continuously improves the safety, efficiency, and reliability of solar electric vehicles spreads a positive perception of solar power and electric vehicles to the surrounding community, and inspires children to pursue careers in STEM.





# ANATOMY OF SOLAR CARS

A solar car is a solar-powered electric vehicle. A photovoltaic array on the vehicle surface converts solar energy into chemical energy stored in a battery pack. In turn, the batteries release electrical energy to drive motors that propel the vehicle. Below are some of the parts of a typical solar car:





# THE RACES

The competition is conducted with two vehicle classes: Single Occupant Vehicles (SOV) and Multi-Occupant Vehicle (MOV). SolarCar at VT will design an SOV for the American Solar Challenge (ASC). This type of vehicle seats one person has limited battery weight and is only allowed to charge via solar energy. The primary objective is to cover the most amount of distance (mileage) in the shortest amount of time.

## SUMMER 2024 THE AMERICAN SOLAR CHALLENGE



The American Solar Challenge originated in 1990 after General Motors’ SolarCar won the World Solar Challenge in 1987. The challenge – a multi-day, high-mileage rally race – was adopted in the US under the name of “Sunrayce USA”, which changed to “The American Solar Challenge” in 2001.

In the road event – the “Challenge” – teams will compete in an 8-day, 1500 to 2000 mile cross-country road rally race to finish the course in the shortest time.

## SUMMER 2023 FORMULA SUN GRAND PRIX

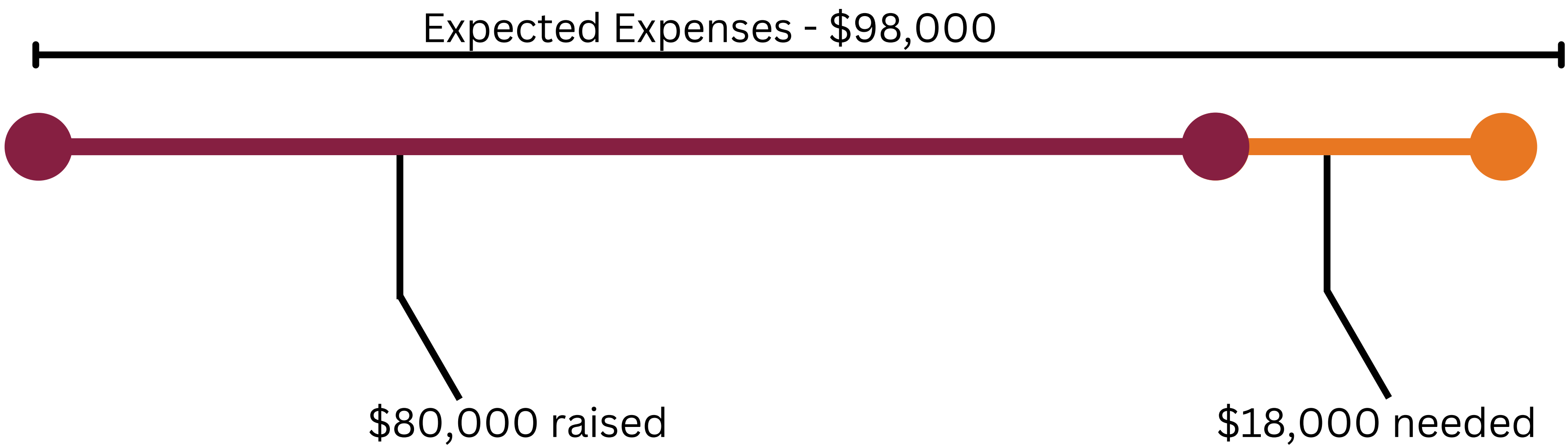


3-Day track event on a 2.5 miles racetrack that tests the vehicle's cornering, braking, and acceleration; sufficient laps will qualify a team for the main road event.



# BUDGET

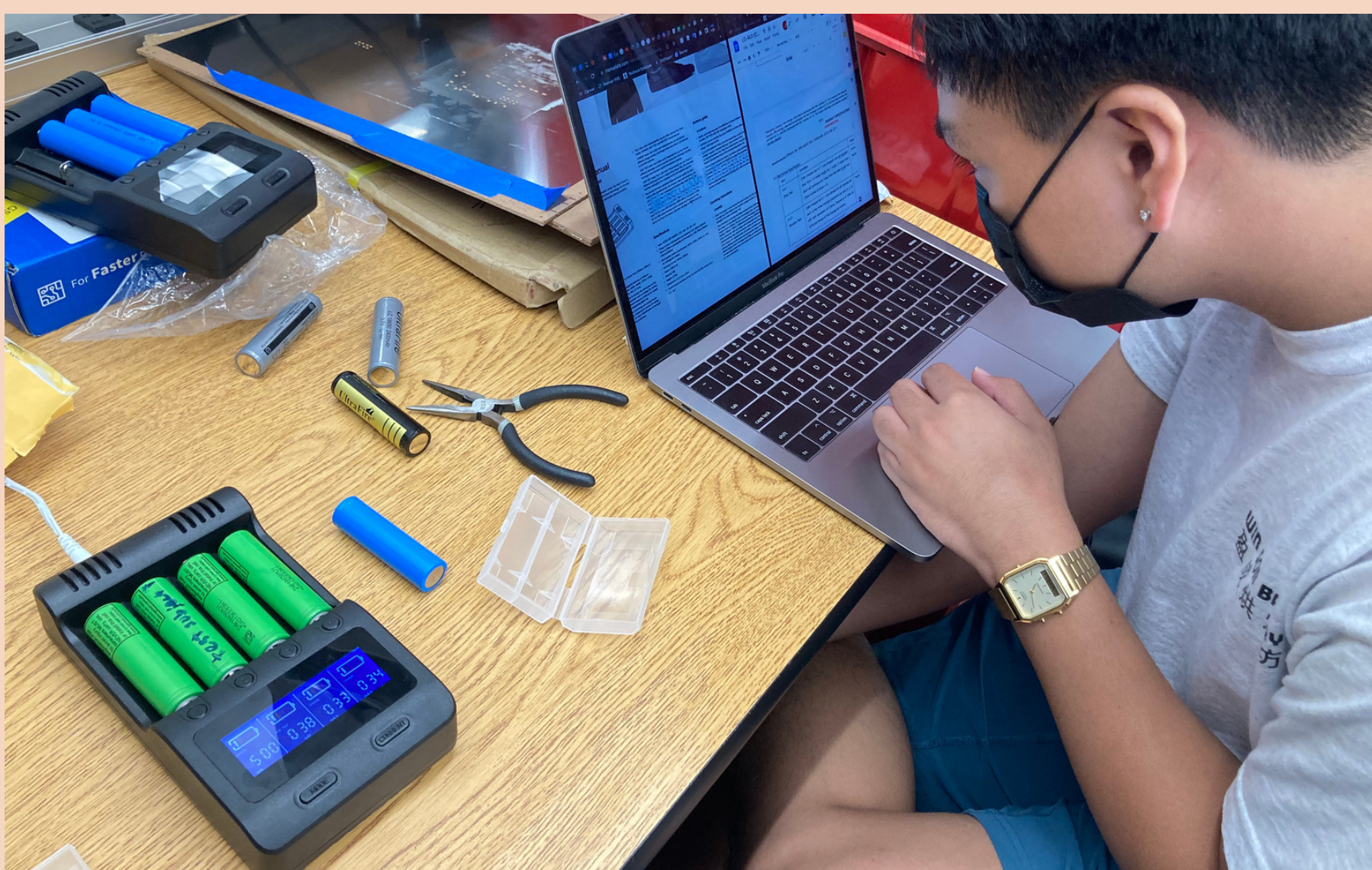
Category	Projected Costs
<b>Mechanical</b> <ul style="list-style-type: none"><li>Suspension and Subsystem</li><li>Steering and braking system</li><li>Wheel and Tire Subsystem</li></ul>	<div>\$4,500</div> <div>\$3,000</div> <div>\$7,000</div>
<b>Aerodynamic</b> <ul style="list-style-type: none"><li>Chassis Subsystem</li><li>Aerobody Subsystem</li></ul>	<div>\$15,000</div> <div>\$12,000</div>
<b>Electrical</b> <ul style="list-style-type: none"><li>Solar Array Subsystem</li><li>Battery Subsystem</li><li>Electrical Circuitry Subsystem</li><li>BMS Subsystem</li></ul>	<div>\$6,500</div> <div>\$4,000</div> <div>\$15,000</div> <div>\$8,000</div>
<b>Logistics</b> <ul style="list-style-type: none"><li>Cross-Country Equipment Transportation</li><li>Competition Equipment Rental</li><li>Additional Fees / Expenditures</li></ul>	<div>\$6,000</div> <div>\$5,000</div> <div>\$12,000</div>
<b>Total</b>	<b>\$98,000</b>





# IMPACT

Electric vehicles (EVs) are the future of personal transportation. Due to their reduced environmental impact in comparison to internal combustion engine vehicles, EVs have been growing in market share and consumer popularity. However, EVs are still charged using grid electricity that is mostly generated from the combustion of fossil fuels. Solar-powered electric vehicles can be an alternative or supplemental solution to this problem, by replacing the fossil fuel grid electricity with solar panel electricity.

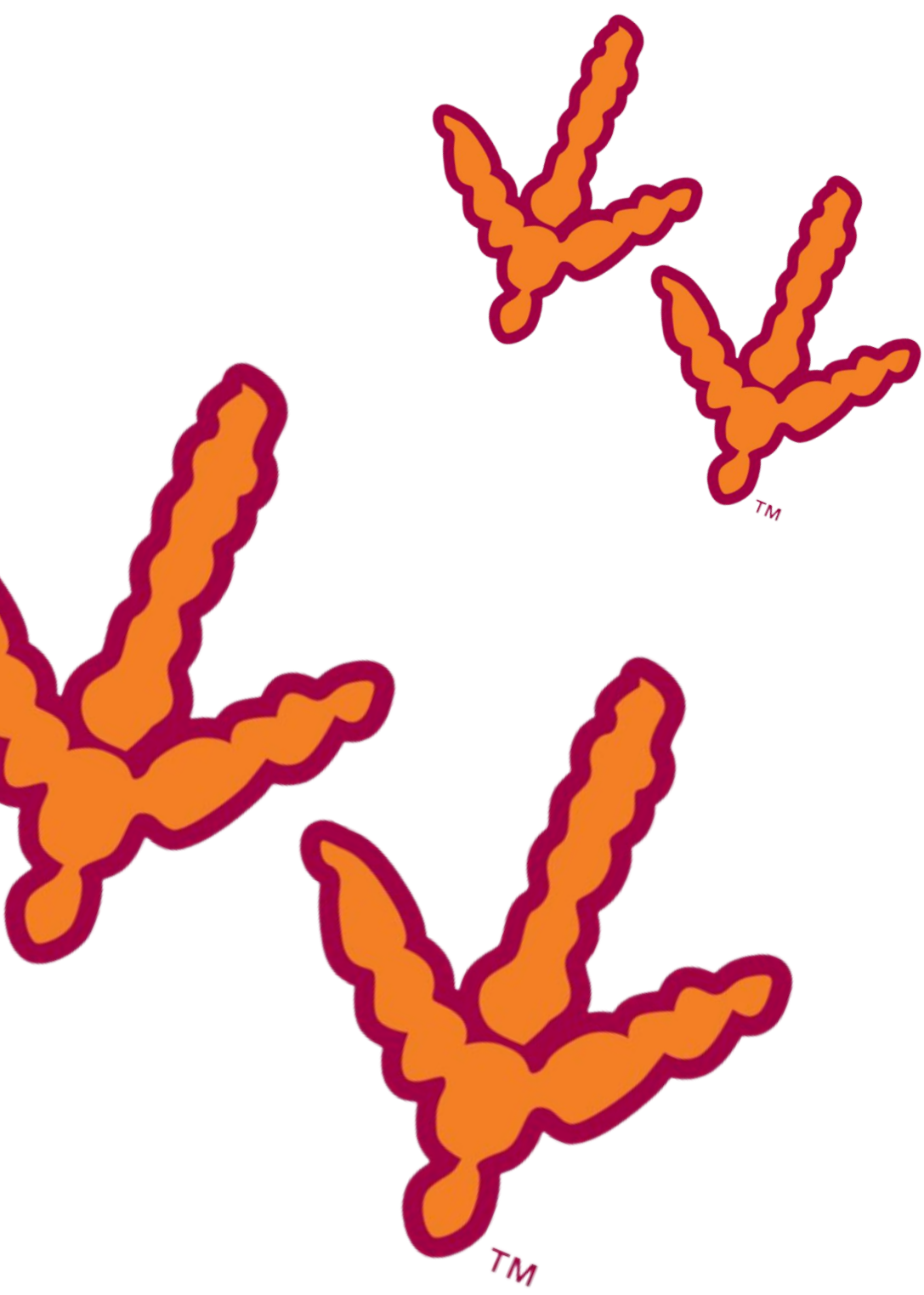


As our team members design and build our solar car, they develop critical and practical engineering skills that will enable them to bring new ideas into the industry. Your sponsorship is therefore an investment in both the future of personal transportation and in the future of the minds that will bring about technological advancements that will aid society.





# WE NEED YOUR SUPPORT



This is the **second** year since SolarCar at Virginia Tech has been established. Your support in the form of financial and/or technical resources would enable the team to build a solar car to compete at this national engineering competition. A strong performance by Hokie Solar Racing at this event would bring recognition to the team that sets up the team for continued future success.

## WHY SUPPORT US?



There are many reasons to sponsor the team, including but not limited to:

### I. Advertisement

Your company logo will have a spot on Hokie Solar Racing's website, banners, apparel, and on the SolarCar racing car model - which will be viewed by anyone at the social events, the competition, and outreach events, giving publicity to your company with engineering students, industry members, and young children.

### II. Recruitment

Your company will have the opportunity to speak with our members, who will have experience in engineering design and manufacturing in a practical and team setting that provides them the qualities for future success in the industry with potentially your company.



# SPONSORSHIP TIERS

	Friends	Bronze	Silver	Gold	Platinum
Name on Website:	✓	✓	✓	✓	✓
Social Media Shoutout	✓	✓	✓	✓	✓
Updates on Car Development:	✓	✓	✓	✓	✓
Logo on Banners:		✓	✓	✓	✓
Logo on Website:		✓	✓	✓	✓
Access to Resume Book:			✓	✓	✓
Logo on Team Apparel:			✓	✓	✓
Logo on Website Homepage:				✓	✓
Logo on Solar Car:				✓	✓
Priority Logo Placement:					✓
Recruitment Events:					✓

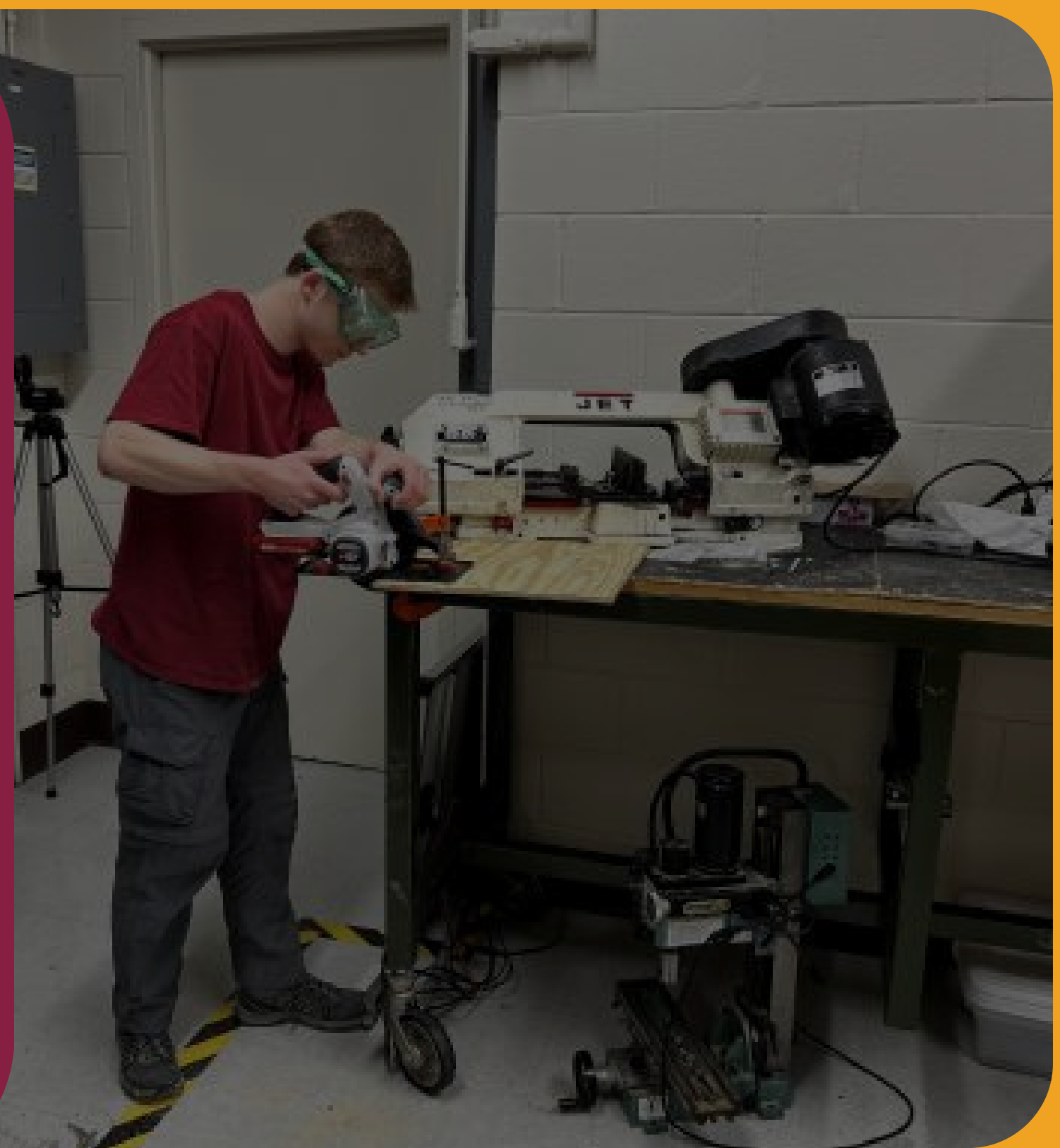


# FRIENDS

\$500+

## Thank you!

Without our sponsors, it wouldn't be possible to build our solar cars. To show our appreciation we will display your name on our website along with a social media shoutout and frequent updates on car development.



# BRONZE

\$1,500+

## Logo on Banner and Website

Display your logo on our banners that we take to all events along with our website, providing you with valuable exposure to our audience.





# SILVER

\$2,500+

## Access to Resume Book

Virginia Tech is a leading engineering school with global recognition. Students receive an exceptional education in the classroom and hands-on experience from working in Solar Car. Gain access to the resumes of our talented students.



## Logo on Team Apparel

We take pride in our apparel. It represents us at every event, race, and even in our daily lives. Your logo will be prominently displayed on our team apparel, which we and other supporters will wear and show to the world.





# GOLD

## \$7,500+

*75% of donations must be monetary*

### Logo on Solar Car

Our car is the face of our club. It will be the first thing to catch any onlooker's eyes. Your logo will be displayed on our car to convey our gratitude towards you to the numerous spectators fascinated by our car.

### Logo on Website Homepage

Our team website attracts the most traffic among our digital platforms. We will display your logo on our homepage, where you will gain exposure to thousands of potential visitors interested in our work and values.



# PLATINUM

**\$15,000+**

*75% of donations must be monetary*

## Priority Logo Placement

Among other logos on our car, team apparel, and banners, make yours stand out the most. We will collaborate with you so that your logo will gather the most attention. This will enable you to enjoy the highest visibility at all our social events and competitions.



## Recruitment Events

Students from Virginia Tech go to work in many Fortune 500 companies. Within almost 2 years of our establishment, team alumni have already marked their futures in many of these companies. We will work with you to organize on-campus events to meet and recruit our team members or other students who interest you.





# THANK YOU!



Without your support, it would be impossible for the team to undertake this massive project. Your donations are what make it possible for us to pursue this goal, and we are always very grateful. We thank you for taking us into consideration. If you need more technical details, you can reach out to our faculty sponsor, Dr. Saied Taheri at [staheri@vt.edu](mailto:staheri@vt.edu) or (540) 231-0032. If you would like to initiate the process to make an in-kind or monetary donation, please contact the team email at [solarcaratvirginiatech@gmail.com](mailto:solarcaratvirginiatech@gmail.com)

Best regards,

SolarCar at Virginia Tech



HEXAGON

cādence

## CONTACT US!

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@SolarCar at Virginia Tech