

A REPORT ON Race To Top With AWS

Date: 14th & 15th March, 2023

Venue: Dr. Aryabhat Auditorium, Silver Oak University
Millennium Hall, Silver Oak University

 **RACE TO TOP
WITH AWS** 



GUJARAT'S FIRST AWS DEEPRACER LEAGUE

Introduction:

AWS DeepRacer is a cloud-based service provided by Amazon Web Services that allows developers to train and test autonomous driving models using machine learning techniques. It uses an autonomous vehicle, known as the **DeepRacer**, which developers can program using the Python programming language. Silver Oak University, Silver Oak University IEEE Student Branch, Silver Oak University IEEE Computer Society Student Branch Chapter along with Silver Oak University AWS User Groups, hosted Gujarat's First Ever AWS DeepRacer League, "Race To Top With AWS". It provided a comprehensive platform for developers to learn and experiment with machine learning algorithms for autonomous vehicle development.

About the Speakers:

Esteemed speakers Mr. Vaibhav Malpani, a Senior Software Developer at Incedo, AWS Community Builder, winner of the AWS DeepRacer League at 2019 Mumbai AWS Summit, and Mr. Nilesh Vaghela, Founder at ElectroMech Corporation, and an AWS Community Hero, RHCI, supported and guided the event. They provided students with a valuable opportunity to learn about emerging technologies.

About the Session:

Date: 14th & 15th March, 2023

Time: 11:00 AM IST Onwards

Venue: Day 1: Millennium Hall, Silver Oak University

Day 2: Dr. Aryabhat Auditorium, Silver Oak University

Participants: 120

Day 1:

At 11:15 AM, a group of enthusiastic and innovative young developers gathered to commence the session. The event kicked off with a warm welcome to the esteemed guests, Mr. Vaibhav Malpani sir and Mr. Nilesh Vaghela sir with a bouquet as a token of gratitude.

The respected dignitaries were then requested to take their seats in the audience while Mr. Nilesh Vaghela gave the students a brief overview of the day's agenda. After a brief introduction about the working of autonomous cars, he emphasized the significance of machine learning and reinforcement learning. He then proceeded to explain the various races in the DeepRacer League and provided a general overview of the two-day event.

With his valuable insights shared, he handed the stage over to Mr. Vaibhav Malpani sir, who kicked off his session by introducing the participants to the DeepRacer Service. Next, he presented a video highlighting the past AWS DeepRacer Leagues and elucidated the general model and working of an autonomous car, explaining all the details with the help of a 3D virtual model.

He elaborated on the various parameters used in creating an autonomous driving algorithm and shared personal tips and tricks for optimizing its performance with the audience.

Following this, he proceeded to describe the track specifications and the point reward system on which the car will run on the track. He moved forward and explained the entire model building and training journey to the students along with the code and functions used in the process. He concluded his session by stating the rules of the race.

Following a brief lunch break, the students engaged in a hands-on workshop to further enhance their knowledge and begin constructing their own autonomous car models. All the participants were enthusiastic and engaging as they actively questioned the speaker on many aspects of the algorithm code and worked hard on training their models for the race. As the day drew to a close, all the participants simulated their car models on a racetrack and submitted their algorithms to the cloud.


Day 2:

On 15th March, day two of the AWS DeepRacer League organized by Silver Oak University IEEE Computer Society Student Branch Chapter in collaboration with AWS User Groups, Silver Oak University commenced at 12:00 PM where participants arrived at the venue and took their respective seats in the audience.

Thereafter, the dignitaries Mr. Vaibhav Malpani Sir, Mr. Nilesh Vaghela Sir, Dr. Saurin Shah sir, Vice Chancellor of Silver Oak University, Mrs. Sweta Khandwala director of Silver Oak University and Dr. Satvik Khara sir, Dean, Diploma Engineering, SOU; Head, Department of Computer Engineering, SOCET; Founding Member of Silver Oak University IEEE Student Branch; Chair of SIGHT, IEEE Gujarat Section; Secretary of Computer Society, IEEE Gujarat Section arrived at the venue.

Proceeding this, an interview with the written as well as digital media was conducted with the management of Silver Oak University. Next, the students were excited as the top 15 participants from the simulations held on the previous day's session were announced to showcase their algorithms and invited to deploy them in the car for the race. The event continued on as each contestant showed their capabilities and talent and their cars zoomed around the track in a close call of time trials. After a number of thrilling races, the dignitaries were called on the stage and greeted with bouquets and tokens of appreciation. The principal of Silver Oak University, Mr. Saurin Shah sir also shared his wise words where he admired the determined efforts of the entire organizing team and all the volunteers.


The event went on without a hitch as the rest of the races continued and all the participants were left on the edge of their seats with anticipation and excitement. After the contest came to an end, the top 15 participants were given AWS DeepRacer T-Shirts to acknowledge their talents and diligent work. Following which, the announcers declared the winners and were rewarded with the cash prize of Rs 5000, Rs 3000 & Rs 1000 respectively.



Event concluded with distribution of certificates to participants and an appreciation speech by Mr. Vaibhav Malpani Sir regarding the event, faculties, IEEE members and all participants. He extended his gratitude to the sponsors and declared the event closed.

Conclusion:

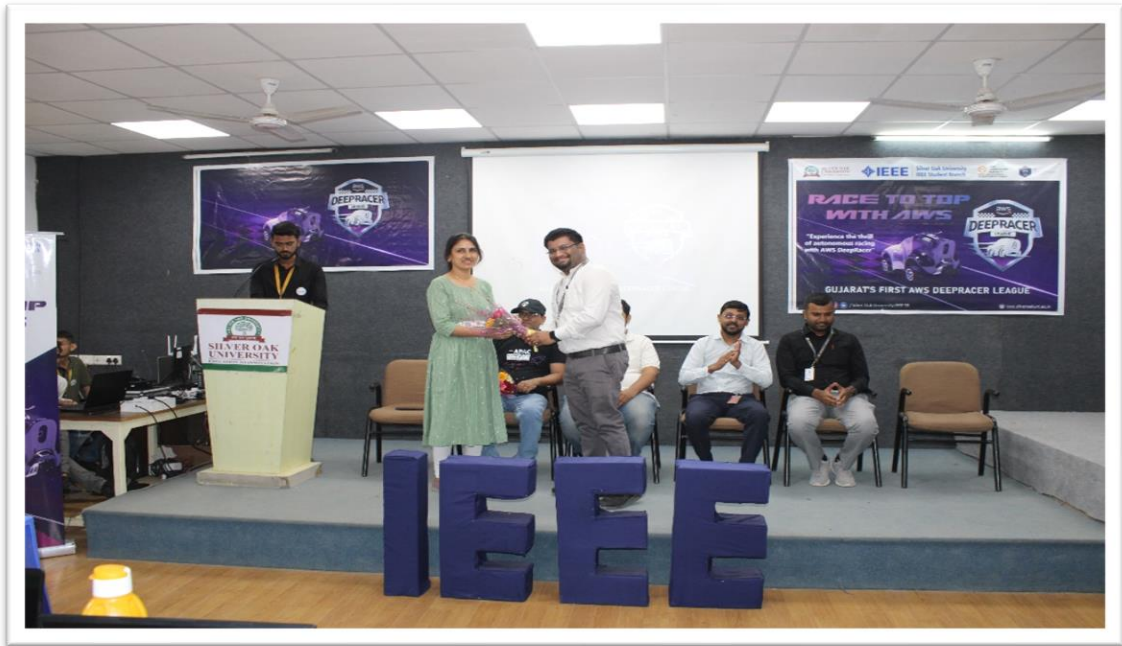
This event can be considered as the **Flagship Event** of the Silver Oak University IEEE Student Branch considering the scale, participation, and enthusiasm in the event. The efforts made by the management and volunteers were all paid off contemplating the participants' response, feedback, and the reach of the event. Silver Oak University IEEE Student Branch felt proud when the event was accounted for display in multiple news channels throughout Gujarat. Another proud worthy moment for the event was the participants' response during the course of announcement of the event which went over 200 responses across Gujarat. IEEE SOU SB strives for success and development from the inception and these kind of events accounts the commitment and potential of the organization.



Some glimpses of the event:

Day 1:









Day 2:

