KGiSL Educational Institutions

Coimbatore.

DEEPRACER 3.O

Event Details and Guidelines

About DeepRacer 3.O

The DeepRacer League is a virtual and Physical Racing league that uses deep reinforcement learning to train autonomous vehicles that compete on a simulated racetrack. It is organized by KGiSL Educational Institutions, Coimbatore, Tamilnadu and is open to Academic and Industry members interested in learning about and experimenting with machine learning. Participants can train their own models using the AWS DeepRacer platform. The 48 hrs Bootcamp provides mentors, workshops and technical sessions for the participants to make their model complete the race in the minimum time period.

Event Details:

- Date: 26/07/2024 5.00 pm to 28/07/2024 5.00 pm
- Venue: KGiSL Campus, Saravanampatti
- Registration Deadline: June 15th, 2024.

Eligibility:

- The event is open to both academic and industry members interested in learning about and experimenting with Machine Learning, Deep Learning, Reinforcement learning and Artificial Intelligence.
- Participants must register within the specified registration dates to be eligible to participate in the event.

Team Composition:

- Each team can have a maximum of three members, including a team leader.
- One faculty Single Point of Contact (SPOC) is must for each college team.

Registration:

- Registration for the event is open from April 30, 2024, to June 15, 2024.
- Link: https://bit.ly/deepracer3

E-Learning - DeepRacer Course:

- Participants must complete the DeepRacer course on Coursera, which will be assigned to each individual student within a team.

- Access to the course will be provided from the registration date until July 1, 2024, via email sent to the student's registered email address.
- Each members in the team must complete the course in order to participate in the virtual race.

Virtual Race:

- The virtual race will take place from July 3, 2024, to July 18, 2024.
- Participants must train their own models using the AWS DeepRacer platform.
- The goal is to make their model complete the race on a simulated racetrack in the minimum time period.

Deepracer Mentors:

- After registration, each student team will be assigned a mentor.
- All registered students are required to complete the DeepRacer course on Coursera.
- Student mentors will provide guidance and support to team members throughout the training phase.
- They will help team members understand concepts related to reinforcement learning and Deepracer.
- Mentors will assist team members in troubleshooting technical issues and optimizing their models for the virtual race.
- Mentors will guide teams on how to complete the virtual race using the AWS DeepRacer platform.
- They will provide assistance in training models, configuring parameters, and evaluating performance.
- They will provide guidance on fine-tuning models for real-world scenarios and optimizing performance on the physical track.
- Mentors will assist teams in understanding track layouts, optimizing model parameters, and implementing effective racing strategies.

AWS Login Credentials:

- Upon completion of the Coursera course, participants will receive AWS login credentials.
- These credentials will allow participants to access the AWS DeepRacer platform for training their models.
- Participants can use the AWS console to set up and train their models using reinforcement learning techniques.
- The trained models will be used for the virtual race, where teams will compete against each other on a simulated racetrack.

Bootcamp:

- A 48-hour bootcamp will be conducted from July 26, 2024, to July 28, 2024.
- The bootcamp will provide mentors, workshops, and technical sessions to help participants improve their models and racing strategies.

Bootcamp Eligibility:

- Students who have completed the Coursera course and participated in the virtual race are eligible to participate in the bootcamp.
- Only teams that have completed the virtual race are allowed to participate in the bootcamp.

Bootcamp Objectives:

- The bootcamp aims to provide additional training, mentoring, and technical workshops to further enhance the skills of participants.
- Participants will have the opportunity to refine their models, learn advanced techniques, and optimize their racing strategies under the guidance of mentors and experts.

Selection for Finale:

- The top 10 teams from the virtual race will be selected to participate in the bootcamp.
- After the bootcamp, the top-performing teams will be further evaluated based on their performance and improvement during the bootcamp.
- The final selection for the grand finale will be based on the performance of the teams during the virtual race and their progress during the bootcamp.
- The top 10 teams selected from the bootcamp will compete in the grand finale on the third day.

Grand Finale:

- The grand finale will take place on July 28, 2024 at 2.00 pm.
- Each top teams can participate with their trained model.
- Teams will compete against each other on the racetrack.
- The winning team will be determined based on their performance in the grand finale.

Additional Guidelines:

- Participants are expected to abide by the rules and guidelines provided by the organizers throughout the event.
- Any violation of rules or misconduct may result in disqualification from the event.
- These rules and regulations outline the key aspects of the DeepRacer 3.0 event, including eligibility, registration, competition format, and additional guidelines. Participants are encouraged to familiarize themselves with the rules and regulations and prepare accordingly for the event.