REPORT

TEAM SVCE-DRIVERLESS - SDCC 2022-2023 ACADEMIC YEAR

Team SVCE-DRIVERLESS participated in the Self Driving Car Challenge (SDCC) 2022 organized by the Society of Automotive Engineers (SAE). The team consisted of 10 members from various departments, including Automobile Engineering, Electrical and Electronics Engineering, Electronics and Communications Engineering, and Computer Science (Artificial Intelligence and Data Science). The team aimed to develop a self-driving car capable of navigating various scenarios.
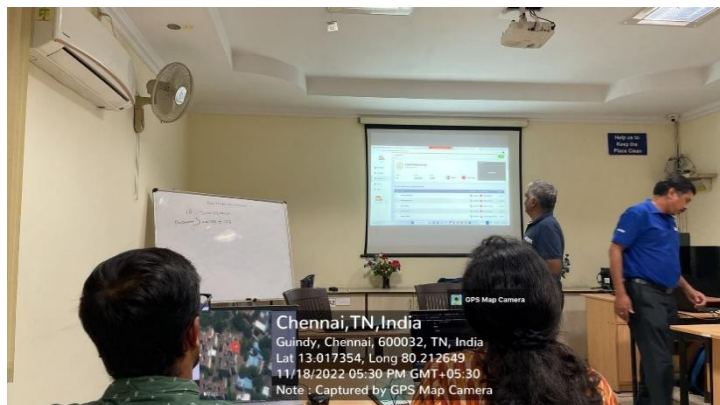
Team Formation

The team members were selected based on skill, availability, and experience, ensuring a diverse skill set within the team. Each member contributed their expertise to the project, fostering collaboration and innovation.

Registration Fees

To enrol in the SDCC 2022 competition, the team paid a registration fee of 118,000 INR. This cost was split equally among the team members, resulting in a contribution of 11,800 INR per member. The registration fee covered participation in the competition, access to resources, and support from SAE.

Workshops

Throughout the academic year, the team participated in three workshops organized by SAEINDIA Southern Section office. These workshops provided valuable insights and knowledge necessary for the development of a self-driving car.

1. Python Workshop

Date: 18th November 2022 to 20th November 2022

This workshop focused on enhancing the team's proficiency in Python programming, which is widely used for implementing machine learning algorithms and computer vision techniques in autonomous vehicles. The workshop covered fundamental concepts, advanced topics, and hands-on exercises.

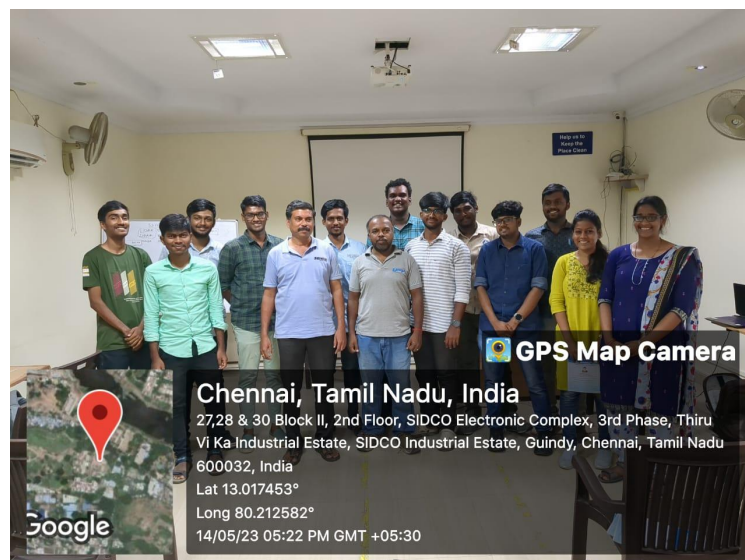## 2. *Perception Algorithms for Self-Driving Cars*

Date: 26th January 2023 to 28th January 2023

The second workshop aimed to familiarize the team with perception algorithms used in self-driving cars. Participants learned about object detection, lane detection, and other vital aspects of perception required for the vehicle's environment understanding. The workshop included theoretical sessions, practical demonstrations, and coding exercises.
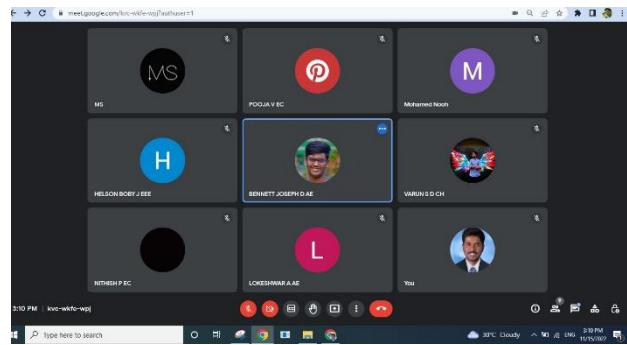
3. *Autonomous Valet Parking - Hands-On Session*

Date: 13th May 2023 & 14th May 2023

This hands-on session provided the team with an opportunity to gain practical experience in implementing autonomous valet parking systems. The session focused on integrating perception, planning, and control modules to enable a self-parking capability. The team members gained insights into the challenges associated with autonomous parking and learned techniques to overcome them.

To accommodate the team members' regular class schedules and ensure minimal disruption, the team opted for online collaboration. They utilized various online platforms and held virtual meetings to discuss progress, assign tasks, and address challenges. This approach allowed for effective communication and collaboration despite the team members being involved in their respective classes.

The 2022-2023 academic year was a productive period for Team SVCE-DRIVERLESS in preparation for the SDCC 2022 competition. The team actively participated in workshops organized by SAEINDIA Southern Section office, enhancing their knowledge of Python programming, perception algorithms, and autonomous valet parking. The team's dedication, skills, and online collaboration led to significant progress in the development of their self-driving car.

Overall, Team SVCE-DRIVERLESS has shown tremendous dedication, teamwork, and technical competence throughout the 2022-2023 academic year, positioning themselves as strong contenders in the SDCC 2022 competition.