

INSTITUTO TECNOLÓGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY
VANTTEC
COMMUNITY & OUTREACH DESCRIPTION

During the last year, the team has achieved remarkable milestones to reach one of our main goals, to give back our knowledge and expertise to our community. Mainly by participating in events and developing new projects.

As our mission is to inspire and encourage undergrad students to get involved in STEM activities related with autonomous vehicle technologies, the team has participated in the following events to showcase our work.

Conexion Tec

Conexion TEC is an event organized by the faculty of Science and Engineering which highlights the best engineering projects from each semester. VantTec participated with the technology developed for RoboBoat and RoboSub in both semesters.

Tec de Monterrey recruitment events

VantTec has recently established an important relationship with the outreach department of our university. Consequently, the team has participated in several recruitment events to share our experience and achievements with high school students.

International Science Competition at Tec de Monterrey

This science competition gathers brilliant high school students from Latin America to challenge their knowledge about STEM subjects. Members of VantTec participated by performing activities to teach about the technologies that are used in our vehicles.

Panels of discussion

Thanks to our strength with local companies and our university, VantTec has been invited to participate in different panels, to talk about topics related with applications of autonomous vehicles and women empowerment in science.

Moreover, to acquire new knowledge and challenge ourselves, the team has developed new projects to go beyond what we learn in classes. Therefore, the following projects have a direct impact on the team members as well as the students in our school campus.

Self-driving car

Currently, VantTec is developing a self-driving car alongside ZF Group, to provide mobility services inside our school campus and become the first Mexican university to implement autonomous vehicles. A campus tour demo is expected to be ready by September 2023.

UAV

In order to inspire and prepare young students for the team, a new project based on the

development of an autonomous drone has been created. This project helps to introduce freshman students to the technologies that we use in the other vehicles. Also, the drone is expected to join a local competition.

Research projects

The research department of VantTec is in charge of linking team students with different doctors from the Science and Engineering faculty, where the most challenging topics are tackled. This year, team efforts yielded the submission of two conference papers (IFAC CAMS) about robust control techniques (still in revision).

ROS classes

Due to the expertise of the team utilizing novel technologies, this semester we started to impart classes about ROS inside the academy, which is a huge opportunity to have a more skillful community in Mexico.

Furthermore, the group vision has always been to empower our community and change the autonomous vehicles culture of our country. Thus, we are really proud of the legacy that we are building.

Evidences:

<https://docs.google.com/presentation/d/1jOYbFBh-gW5I5nhbmDUEhA30X8gwB10fqOtcbrPKwrw/edit?usp=sharing>