
Autonomous AI racer from TU Munich wins Formula 1 race

A racing car controlled by artificial intelligence from the Technical University of Munich (TUM) has won an international competition on the Formula 1 track in Abu Dhabi. Without a human driver or remote control, using only autonomous software, the fully automated vehicle was able to prevail against seven other international teams with identical models. It autonomously searched for the limits, mastered spectacular overtaking maneuvers and speeds of up to 250 km/h on the winding track.

In the final with the four fastest vehicles in qualifying, the system developed by three professors, ten doctoral students and five Master's students at the TUM Chair of Automotive Engineering was able to prevail against strong competition, mainly from Italy. After the qualifying races and the time trial beforehand, the TUM team only achieved third place for technical reasons and started the final from an unfavorable position. After technical problems with the two remaining competitors and a successful autonomous overtaking maneuver, the team was finally able to clinch victory on the last lap.

The state organizer A2RL from the United Arab Emirates had announced this competition in order to hold a real Formula 1 race with autonomous vehicles for the first time. All vehicles were equipped with LaSAR, RaDAR, cameras and numerous other sensors and computers to detect the track and competing vehicles. However, each team had programmed its own software code to localize itself on the track, move the vehicle at the limit and overtake competitors. (aum)

Images for article



Photo: Autoren-Union Mobilität/TUM Autonomous Motorsports
