Prediction of Drivers Post-Training Un-safe Acts (EmpActs)

AI Driven Educational Measures in Predicting Unsafe Acts on the Road

ABOUT

الإمارات لتعليم القيادة
Emirates Driving

ABOUT EDC

Founded in the year 2000 per an Emiri degree, Emirates Driving Company PJSC (EDC) now branded "Emirates Driving", the premier evolution in driver education in the region and serve as a sustainable business, has a unique positioning as one stand-up institute for pre-licensing driving provider in the emirate of Abu Dhabi for 24 continuous years in a row. ED consistently upholds the highest standards in driver training to promote safe and secure road transportation within Abu Dhabi and the region, experiencing rapid population and mobility growth and urban development.

Since its inception, ED has maintained a strategic partnership many global RS Education leaders to continuously enhance its educational programs in accordance with global standards. Additionally, a collaborative quality committee with the Abu Dhabi Police ensures that training programs and methodologies are consistently updated to align with relevant laws and matching their strategies mainly the digital transformation and the 7 stars customer happiness plan. Furthermore, ED plays a significant role in the Abu Dhabi Traffic Safety Technical Committee, mainly road safety education, awareness and training working group and regularly contributes its technical, educational and assessment expertise.

As part of its continuous effort to lead the local and global market in Driver Education, ED has invested in the digital transformation keeping the human being at the center of all its efforts. Hence the coming slides would highlight the support of AI for our experts to produce a unique high quality of training and progress towards the country Vision Zero by 2040.

الإمــارات
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INITIATION

- One trainee Log that profile her/ his learning habits and define her / his progress in driving learning and training was a dream to do since it would indicate a clear impact of the training to the road and save lives.

- Parallel to using the AI in profiling, it is supporting Driver Education in Selecting (Assessment), Training (Theory & Practical), Evaluating (Exam & Testing).

- **than starting using the data to analyze patens related to learning habits, behaviours and relate it to demographics for our 70+ Nationalities empowered by AI.**

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TRAIN

- Constant monitoring of the driver and vehicle ensures a perfect model of the student's behaviour can be captured.

- AI pose detection systems track the drivers' head position, gaze and region of focus

- AI computer vision systems track the drivers' hands and ensure correct placement on the wheel

- The full state of the vehicle is read through the vehicle's CAN bus which offers more detail than typical OBD-2 diagnostic data

- Precision tracking of the vehicle's position and orientation allow detailed monitoring of the

TEST

- Historical training records, tracking performance are automatically generated by the AI scoring system and are used to automatically assess when a student is sufficiently ready to take the exam.

- Detailed, transparent, unbiased reporting allows the students to see where improvement is required. The automated AI driven system will ensure these areas are targeted in the students' training sessions until the required level of competence is achieved.

- Exam reports are tagged into the analytics pipeline along with training records.
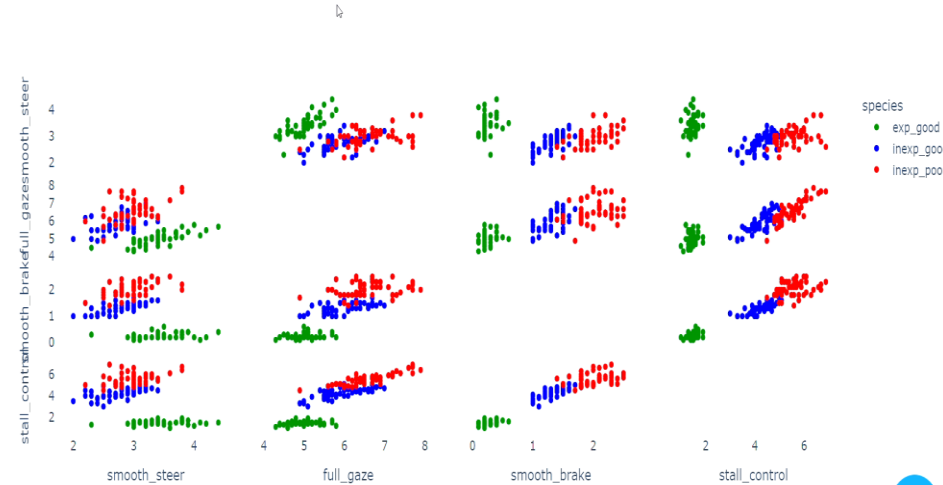
AGGREGATE

- Access to the historical data of students allows for detailed analyses and aggregate statistics calculations.

- Minor behavioural differences can be extracted and identified to track student confidence and help target areas of inexperience.

- These can vary from lack of smooth steering, to erroneous gearshift, to inappropriate breaking, inconsistent acceleration, lack of focus etc.

ANALYZE

- Clustering these data help identify long term training, testing and real-world driving trends in behaviour.

- Students exhibiting traits of inexperience may be monitored over their driving lifetime.

- Integration with traffic police systems will help identify known failures as exhibited on the road

- Closing this loop will help identify which aspects of training and testing can be optimized to improve driver safety on the roads

Vehicle Control Analysis

THANK YOU

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