PROBLEM STATEMENT :-

Vehicle cut-in detection

DESCRIPTION :-

In this project, I developed a machine learning model to detect vehicle cut-in events using the India Driving Dataset (IDD). The process began with data preparation, involving resizing images, normalizing pixel values, and annotating vehicle bounding boxes. A model was trained using TensorFlow to recognize vehicles in video frames. After training, a post-processing algorithm was implemented to detect cut-in events by analyzing the positions of detected vehicles across consecutive frames. The model's performance was validated by saving and visually inspecting frames where cut-in events were detected, achieving satisfactory accuracy. This project provided valuable insights into the practical application of machine learning in autonomous driving scenarios.