Use Case 7: Austroads Vehicle Classification

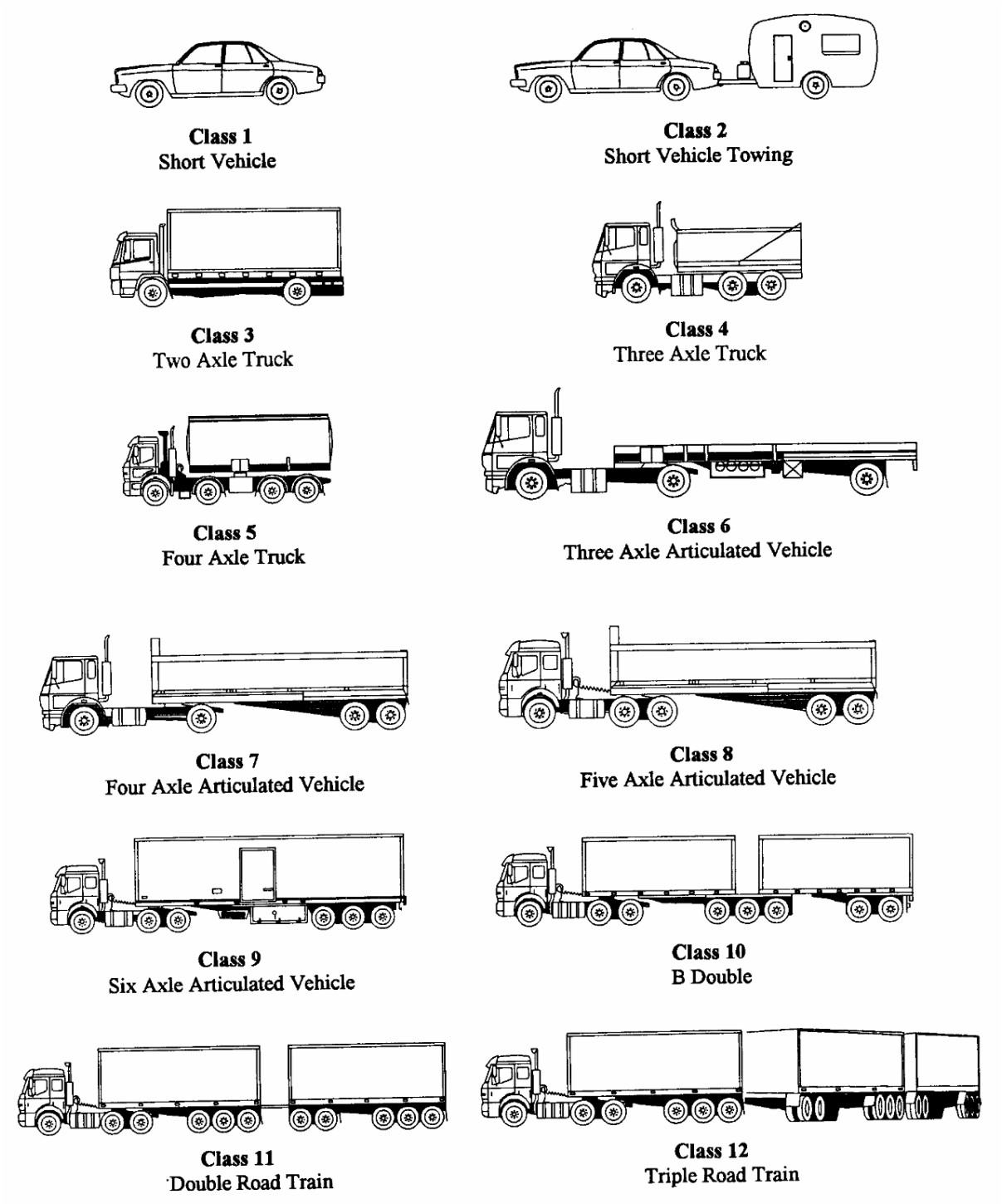
Objective: *Develop an image classification system to accurately classify vehicles into Austroads vehicle categories using collected image data.*

Overview: *This project aims to create an automated system capable of leveraging computer vision techniques to classify vehicles based on the Austroads vehicle classification scheme. By analysing real-world images captured from diverse sources, the system aims to provide valuable insights into traffic composition. These insights will aid in making informed decisions for traffic management, urban planning, and infrastructure development.*

Data Source: *For this project, the dataset will be prepared by collecting a diverse and comprehensive set of real-world images capturing vehicles in various environmental and situational contexts. It is crucial to ensure accurate labelling that reflects the diverse vehicle types and configurations present in the dataset.*

vehicle_class_1	Short Sedan, Wagon,4WD,Utility, Light Van, Bicycle, Motorcycle
vehicle_class_2	Short - Towing groups Trailer, Caravan, Boat, etc.
vehicle_class_3	Two Axle Truck or Bus
vehicle_class_4	Three Axle Truck or Bus
vehicle_class_5	Four Axle Truck
vehicle_class_6	Three Axle Articulated Three axle articulated vehicle, or Rigid vehicle and trailer
vehicle_class_7	Four Axle Articulated Four axle articulated vehicle, or Rigid vehicle and trailer
vehicle_class_8	Five Axle Articulated Five axle articulated vehicle, or Rigid vehicle and trailer
vehicle_class_9	Six Axle Articulated Six axle articulated vehicle, or Rigid vehicle and trailer
vehicle_class_10	B Double B Double, or Heavy truck and trailer
vehicle_class_11	Double Road Train Double road train, or Medium articulated vehicle and one dog trailer (M.A.D.)
vehicle_class_12	Triple Road Train Triple road train, or Heavy truck and three trailers
vehicle_class_13	Unknown vehicle class

Reference: City of Melbourne open data website



Reference: Austroads vehicle website

Conclusion: *By implementing an image classification system for Austroads vehicle categories, Melbourne can utilize advanced computer vision techniques to optimize traffic management strategies, enhance road safety measures, and support sustainable urban development. This approach not only facilitates efficient transportation networks but also contributes to improving the overall quality of life for residents and visitors by ensuring safer and more streamlined traffic operations.*