

Training and Testing an Autonomous Driving System

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Autonomous Driving Systems (ADS) have often been a phenomenon confined to science fiction media. However, recent advancements in computer vision, computation power, and big data technologies have allowed this phenomenon to become a reality. At the heart of every ADS or self-driving car is the ability to sense its environment. In fact, this ability is the most important feature in driving an automobile. We humans almost take this ability for granted when we get behind the wheel, but for an ADS the process of learning this task and implementing it takes years of optimization and incorporation of several technologies.

This project aims to optimize a very important variable that an ADS must evaluate after analyzing its environment: the steering angle. The steering angle is incredibly important to a self-driving car to ensure that it handles turns well, stays in its lane, avoids objects and collisions, and performs correctly in several other scenarios.