A

Minor Project Report

On

"End to End Deep Learning for Self-driving cars"

Submitted in partial fulfilment of the requirement for the award of Degree of

Bachelors of Technology

In

Computer Science And Engineering

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SCHOOL OF STUDIES ENGINEERING AND TECHNOLOGY,

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR, CHHATTISGARH

(A CENTRAL UNIVERSITY)

2022-23

Submitted by

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CERTIFICATE
OF PARTICIPATION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

Sanjay Prasad Dunna

participated in "Machine Learning"
from 01st Aug, 2022 to 30th Sep, 2022
and successfully completed the program.

15-Oct-2022

DATE

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TIITG-2210003084

Introduction

Autonomous vehicles rely on sensors, actuators, complex algorithms, machine learning systems, and powerful processors.

Based on a variety of sensors located throughout the vehicle, autonomous vehicles create and maintain a map of their surroundings. Radar sensors track the movement of nearby vehicles. Traffic lights, road signs, other vehicles, and pedestrians are all detected by video cameras. Lidar (light detection and ranging) sensors measure distances, detect road edges, and identify lane markings by bouncing light pulses off the car's surroundings. When parking, ultrasonic sensors in the wheels detect curbs and other vehicles. After that, sophisticated software processes all of the sensory input, plots a path, and sends commands to the car's actuators, which control acceleration, braking, and steering. The software follows traffic rules and navigates obstacles thanks to hard-coded rules, obstacle avoidance algorithms, predictive modelling, and object recognition.