



**CODE
IIT MADRAS**



This is to certify that

SUDARSHANA KARKALA

has successfully completed the course on

Electric Vehicle Engineering & Development Lab

conducted by the

Centre for Outreach and Digital Education (CODE), IIT Madras

during the period 20th and 21st March, 2026

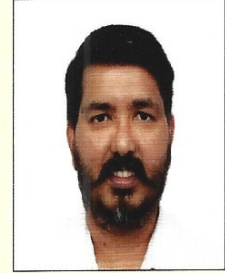


Roll No: EVDC3121225027

Prof. Andrew Thangaraj
Chair,
Centre for Outreach and Digital Education
IIT Madras



**CODE
IIT MADRAS**



This is to certify that

SUDARSHANA KARKALA

has successfully completed the certificate course on

Electric Vehicle Engineering & Development (EVEND)

conducted by the

Centre for Outreach and Digital Education (CODE), IIT Madras

during the period January to April, 2025



Roll No: EVDC1200125014

Prof. Andrew Thangaraj

Chair,
Centre for Outreach and Digital Education
IIT Madras

Course Faculty: Prof. B. Balaji

| S.No | Topics Covered |
|------|--|
| 1 | Introduction to Electric Vehicles |
| 2 | EV Design Process |
| 3 | Vehicle Regulations |
| 4 | Vehicle Development Process |
| 5 | Battery Electric Vehicles |
| 6 | Fuel Cell EVs |
| 7 | Powertrain |
| 8 | Batteries and Battery Energy Management |
| 9 | Vehicle Topologies and Architecture |
| 10 | Electric Two Wheelers - Scooters and Bikes |
| 11 | Electric Three Wheelers |
| 12 | Electric Cars, Buses and Trucks |
| 13 | Safety, Design Philosophy, Design Verification and Virtual Engineering |