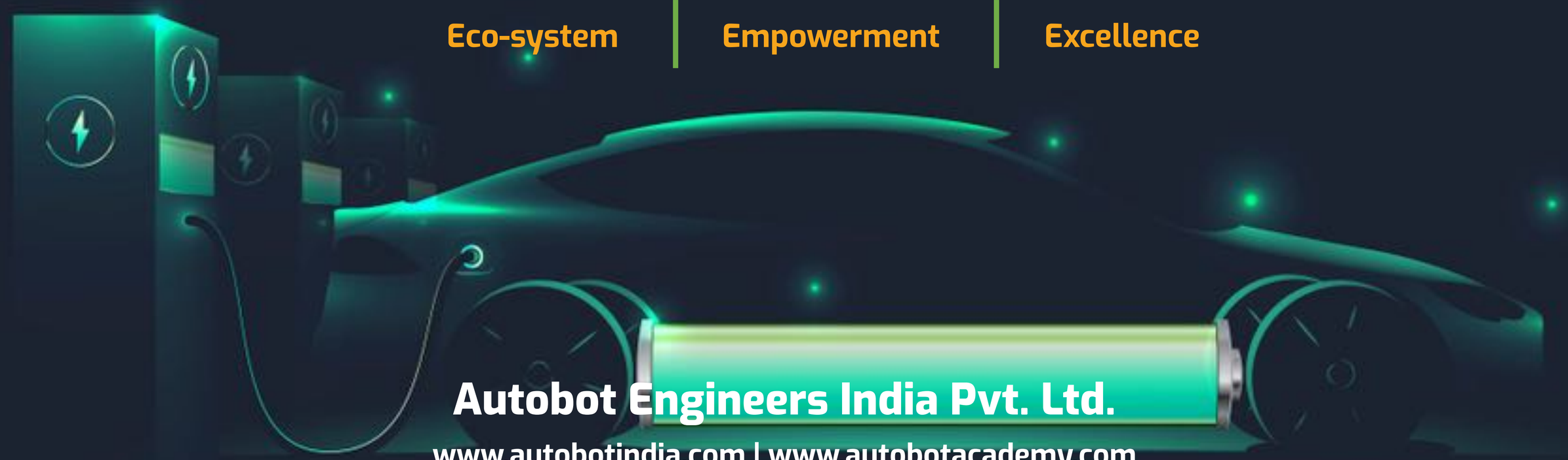
AUTOBOT® INDIA
inspiring ages

Empowering EV since 2017

India's First and Leading EV Technology Learning and Solution Company

Eco-system | Empowerment | Excellence



Autobot Engineers India Pvt. Ltd.

www.autobotindia.com | www.autobotacademy.com

About Autobot Engineers India Pvt Ltd (AEIPL)

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inspiring ages

India's 1st EV Learning Academy

Autobot India is a India's 1st EV solution company in electrification, engineering, learning and development established in 2017 started with the vision to empower to accelerate the green-sustainable mobility and energy adoption in India and globally.

AEIPL introduced India's 1st EV specialised academy "**Autobot Academy"** in 2020, for hands-on learning to empower people and industry in the development of domain skills, employability and capability in EV and future technologies.

1st
to launch EV specialised courses & platform

2500+
Paid subscribers during pilot phase

3 EVTLC Hubs
for Pan India Operation

15+
Trusted OEM, PSUs & Startups

20+
Specialised Courses

10,000+
hours of Green learning

500+
career success stories

80+
Panel of Experts

4.7/5
star rating by learners

INDIA'S BIGGEST

ELECTRIC VEHICLE TECHNOLOGY LEARNING CENTRE (EVTLC)

BHAVDHAN

10,000 Sq.Ft. Hands-on Facility

Advanced Lab & Training Simulators

Electric 2 & 4 Vehicle Tech Platforms

Certification & Recognition

ISO 29990: 2010

Ministry of MSME, Govt. of India

#startupindia

Department of Industrial Policy & Promotion
Government of India
Ministry of commerce & Industry

कौशल विकास और उद्यमशीलता मंत्रालय
MINISTRY OF SKILL DEVELOPMENT AND ENTREPRENEURSHIP

ACMA
Automotive Component Manufacturers Association of India

ASDC
AUTOMOTIVE SKILLS DEVELOPMENT COUNCIL

Empowering the EV ecosystem in India since 2017

We are a born EV company having specialization in EV Technology.

Autobot India Pvt. Ltd. is a leading and One Stop Solution provider company in domain of electric vehicle, which includes

- Training and learning solutions,
- Engineering and consulting,
- Advisory and policy,
- Testing and benchmarking
- Battery assembly line setup and QA/QC audits

SECTORS WE DEAL IN

E-mobility | Education Technology | Energy Storage

Our Brands & Solution Platforms

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inspiring ages

AUTOBOT™ ACADEMY

EVTLC
LEARN. TRANSFORM. CREATE

About Platforms

India's first EV specialized blended learning platform for Skilling, Upskilling and Capability building.

India's first EV specialized Technology Learning Centre to offer in-campus Practical Learning Platform and Experience in EV Technology.

Platform Objective

- Practical Learning Approach
- Seamless Platform for Technology Learning
- Empowering the Youth with Employability
- Capability Building of Corporates

- Dedicated EV Lab infra within Universities campus
- Developing Practical Learning Approach
- Access to Industrial projects and learning exposure
- To develop a platform for ideas, innovation and entrepreneurship in EV technology

Collaborations

MG

ASDC
AUTOMOTIVE SKILLS DEVELOPMENT COUNCIL

Cell Propulsion

AIC | Atal Incubation Centre - eMpi
Supported by AIM, NITI Aayog, Govt. of India

GL BAJAJ
Institute of Management & Research
Approved by A.I.C.T.E., Ministry of HRD, Govt. of India

Snapshot - Our Journey from Scratch to Advance

Pilot & Trail Phases

2017

- We envisioned to strengthen and empower the 5th pillar of EV eco-system “Skill and Manpower” which was unaddressed.
- Introducing India’s 1st EV technology specialised learning platform with Practical Learning Approach (PLA™)

2018-2022

- Organised over 50+ PAN India workshops to create an awareness about EV Technology among industry, professionals, government and academia.
- Over 2000+ professionals and students trained during our “ KIP” and “EV Bootcamps” which has helped us to understand the pain-points of every segments towards adoption of EV technology.
- Segmented our expertise in training, consulting and solutions development to support academia and enterprises in EV adoption and ecosystem empowerment.

Execution Phase

2022-2024

- Collaborated with MG Motor (India’s 1st OEM collaboration for EV course development)
- Introduced EV Technology Learning Centre (EVTLC™) model to empower students and professionals with hands-on learning with real-world EV experience to solve problems.
- Executed several projects in consulting, engineering, training and policy towards EV system empowerment.
- 15 Flagship programs to address domain specific skill development, job functions and technology capability.
- Several other collaborations for certification and assessments with national and international bodies.

Scale Phase

2025-2030

- Focused to strengthen our “Engineering” vertical towards innovative solutions and R&D and our “Service” vertical to imparting solutions to address industry and eco-system challenges.
- To empower 1 million students and professionals to create better future EV engineers.
- To open 5 EVTLC centre in next 2 years within EV cluster cities.
- To open EV Skill Centre to empower the youth from Tier 2 and 3 cities in EV sales, service, and manufacturing.

Our Collaborations and Partners

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NASSCOM®

MG

ASDC
AUTOMOTIVE SKILLS DEVELOPMENT COUNCIL

ACMA
Automotive Component Manufacturers Association of India

Alliance for an Energy Efficient Economy

AIC Atal Incubation Centre - eMpi
Supported by AIM, NITI Aayog, Govt. of India

micelio
The Network That Drives You

ALTAIR

Cell Propulsion

SJT xEV
SJT Electric Vehicles

8 years of building EV excellence Hub for Practical Learning

2017 - Inception Phase

2018

2019

2020-2021

2022

2023

2024 - Advance Phase

- *Our dedicated 8 years of journey in building the EV ecosystem in India for training, development and engineering solutions to support the key stakeholders in faster adoption of EV technology.*
- *We're working as a catalyst between industry, startup community, academia and government in EV and future technologies.*

MG Motor Signed MOU with Autobot Academy for EV Technology Awareness among the Youth of India.

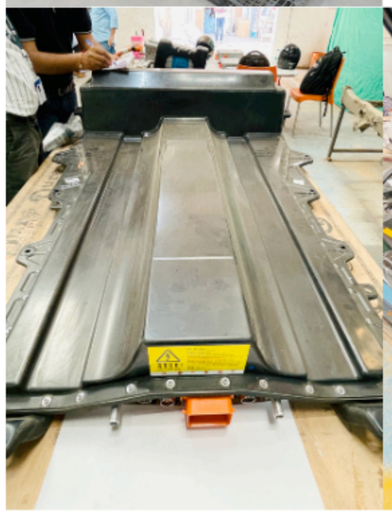
- MOU was signed in November 2020 with MG Motor, Autobot Academy and ASDC
- Autobot Academy and MG Motor have jointly developed the EV programs to empower the youth of India
- Over 1500+ students and professionals got benefited from this program.

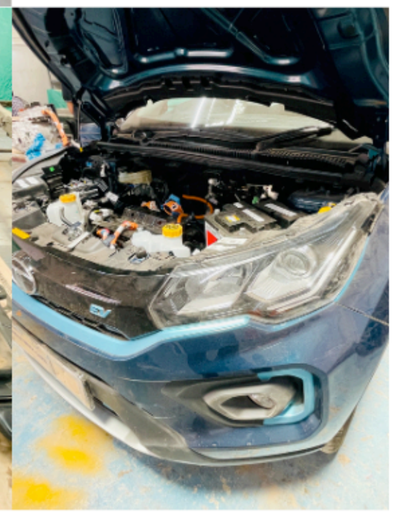
Impacting EV ecosystem through our deep research and innovative solutions

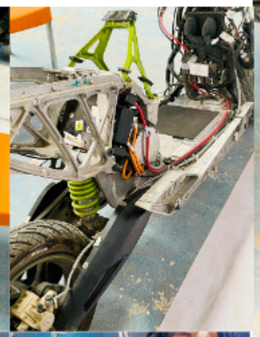
1 R&D Approach for Training & Development

Training Programs inspired from Real world products and technology

Our *deep-knowledge in EV technology and engineering process* enable our training program development *inspired by real-world learning experiences* and case-studies which we develop in-house.







Building One-stop Platform for Employee Training and Development

Autobot in collaboration with its partners developing a network of "EV Technology Learning Centre" in key EV cluster in India to support OEMs and Startups for Employee training and development to become competent and efficient on EV and future technologies.

Impacting EV ecosystem through our deep research and innovative solutions

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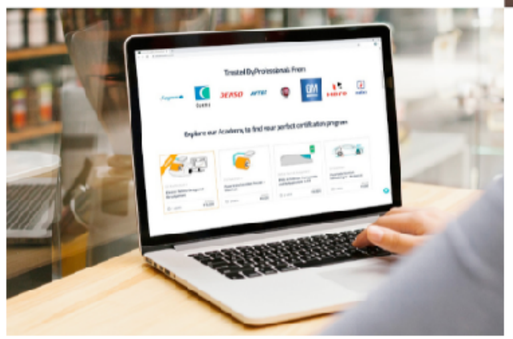
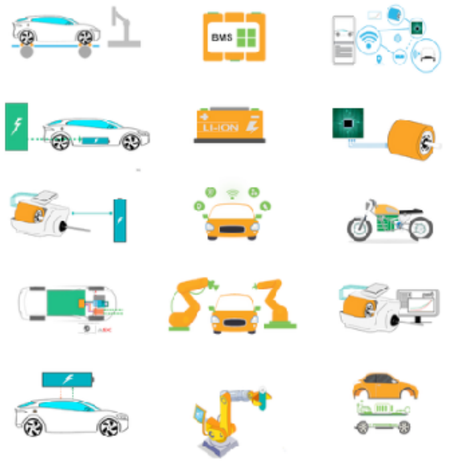
2 Enterprise Learning Solutions



Full-stack Learning and Development Solution

We've developed full-fledged LMS platform for ***online*** and ***hybrid learning experience*** to offer customised and ***domain specialised*** courses, content libraries and LMS system to ***keep updated*** over EV technology to ***employees***.

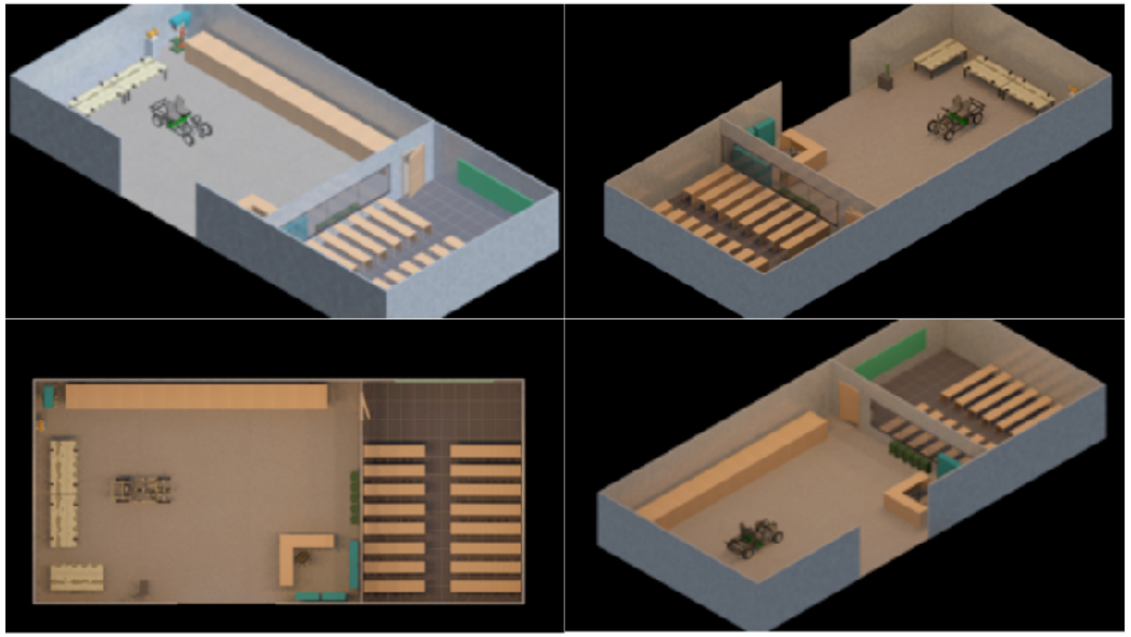


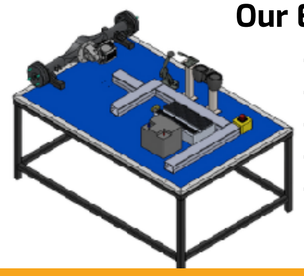
Full-stack Flexible Learning Platform and Eco-system

We have ***innovated an unique solution*** to offer ***live lab learning experience*** with on-demand offline practical learning ***to offer flexibility and time-saving to organisations employees*** in ups killing and day-to-day jobs.

Impacting EV ecosystem through our deep research and innovative solutions

3 EV Lab Solutions





EVTLC
LEARN. TRANSFORM. CREATE

Full-stack EV Trainer Simulators and Learning Kits

Autobot EV trainer simulators and kits will be the game changer in hands-on training and development to empower engineers on learning and implementing real-world problems and simulating to solve complex engineering problems.

Our EVTLC Labs will be equipped with

- EV Powertrain Lab
- Lithium Cell and Battery Lab
- Embedded Lab
- Battery Assembly Lab
- EV Service and Diagnostic Lab
- HV Safety Lab
- MATLAB & AUTOSAR lab
- Vehicle & Component Teardown & Benchmarking lab
- Retrofitment Lab
- Testing and Data Acquisition Lb

Autobot India is for all!!

COMPANIES

- Proficiency Improvement Programs (PIPs)
- Skill Improvement Programs (SIPs)
- Capability Development Programs(CIPs)
- CSR Programs

UNIVERSITIES

- Semester Programs
- Join-collaboration Programs
- Certification courses & Bootcamps
- Autobot EV Technology Learning Centre (EVTLC)

PROFESSIONALS

- Knowledge Improvement Programs (KIPs)
- Employability Improvement Programs (EIPs)
- Capability Development Programs(CIPs)

STUDENTS

- Bootcamps
- Proficiency Improvement Programs (PIPs)
- Knowledge Improvement Programs (KIPs)
- Employability Improvement Programs (EIPs)

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Autobot India is for Everything!!

SKILLS & WORKFORCE

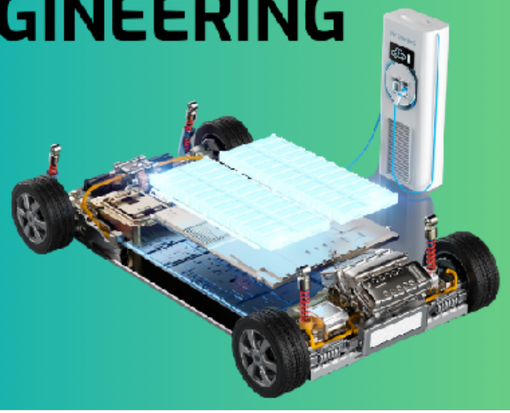
- Onboarding training and learning solutions
- Employee Capability Development Programs
- EV User Centric Programs
- Product Launch Training
- EV Sales and Service Training
- Organisation non-tech staff training
- Talent-related Solutions

ADVANCE FUTURE TECHNOLOGY LEARNING

- AR & VR
- AI & ML
- Hologram

Our Specialised Solutions is for Electric Vehicle

ENGINEERING



SERVICE

SAFETY

Our 3 Level Certification Programs for Industry Partners

LEVEL 1

KIP

Knowledge Improvement Program

- KIP is designed for beginners in EV technology or employees transitioning from ICE domain to EV domain.
- KIP programs is for kind of employee's on-boarding training in EV job roles recommended for engineering, as well as non-engineering workforce.
- Short term (10-20 hours) training programs and courses

LEVEL 2

SIP

Skill Improvement Program

- SIP is designed to enable employee and workforce on critical skills improvement and development in the various job roles of engineering, manufacturing, after sales and service.
- Mid term duration programs (30-50) hours training and development programs.

LEVEL 3

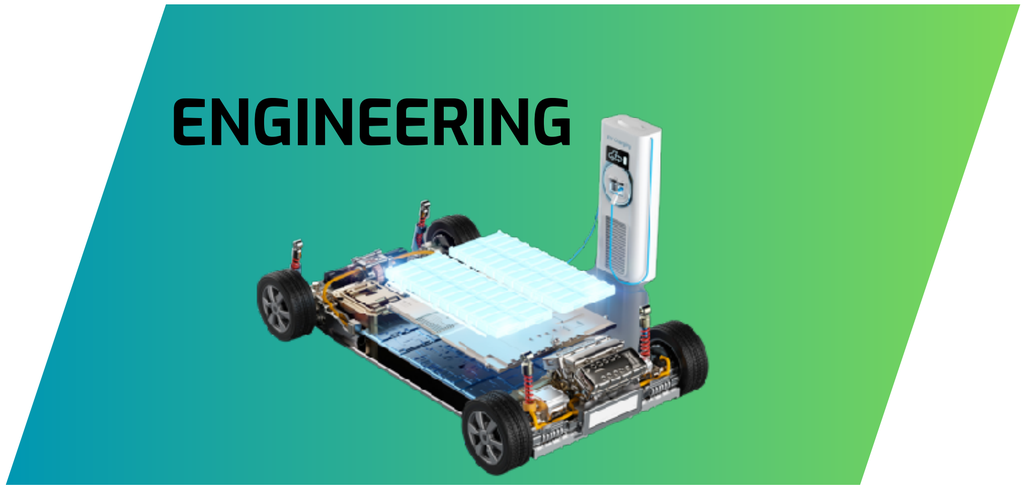
CIP

Capability Improvement Program

- CIP is designed to develop the capability development of employees's and workforce in the specific job roles enhancing the team and workforce performance efficiency and project management.
- Long term programs (80-120 hours) training and development programs.

Autobot India's Value-added Programs in Engineering Domain

Our flagship programs which are developed over the period of 5 years with several upgradation in its syllabus and learning methodologies to meet the current and future skill and capability requirements by EV industry.



LEVEL 1

Knowledge Improvement Program (KIP)

- Mode of Training - VILT/Hybrid/Face-to-face
- Duration: 10-20 hours
- Eligibility: Anyone
- Audience: Technical and non-technical

LEVEL 2

Skill Improvement Program (SIP)

- Mode of Training - Hybrid/Face-to-face
- Duration: 30-120 hours (weekend)
- Eligibility: Technical with L1 certification
- Audience: Technical (engineering, safety and service)

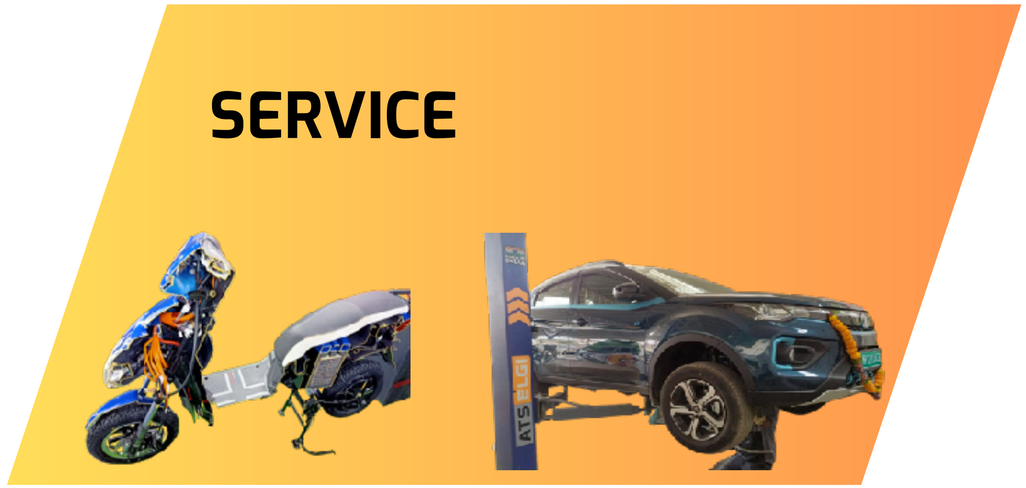
LEVEL 3

Capability Improvement Program (CIP)

- Mode of Training - Hybrid / Face-to-face
- Duration: 30-120 hours
- Eligibility: Technical with L1 and L2 certification
- Audience: Technical (engineering, safety and service)

Autobot India's Value-added Programs in Engineering Domain

Our flagship programs which are developed over the period of 5 years with several upgradation in its syllabus and learning methodologies to meet the current and future skill and capability requirements by EV industry.



LEVEL 1	Specialized for Electric 2&3 wheelers
LEVEL 2	Specialized for Electric 4 wheelers (pass)
LEVEL 3	Specialized for Electric LCVs & HCVs

Autobot India's Value-added Programs in HV Safety Domain

LEVEL 1

Sensitisation for Safe work on Motor Vehicle with HV Systems

- Mode of Training - VILT/Face-to-face
- Duration: 6 hours / 1 day
- Eligibility: Anyone

LEVEL 2

Qualified Electrician for HV Systems in Motor Vehicles

- Mode of Training - Face-to-face
- Duration: 15 hours / 2 day
- Eligibility: Service engineers and technicians, assembly operators, engineers, testing and integration

LEVEL 3

Live working for Qualified Electrician for HV Systems in Motor Vehicles

- Mode of Training - Face-to-face
- Duration: 25 hours / 4 day
- Eligibility: Service engineers and technicians, assembly operators, engineers, testing and integration

Autobot India offers Value-addition through Technology Specilization

OFFLINE

High Voltage Safety and Operations (Level 1 to Level 3)

Certification Level : 2 Duration: 30 Hours

HYBRID

Advanced Embedded System in Electric Vehicles (AESEV)

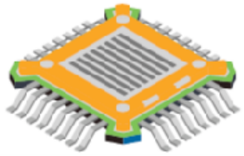
Certification Level : 2 Duration: 120 hours

HYBRID

BMS Design, Development & Testing (BMSDT)

Certification Level : 2 Duration: 120 hours

HYBRID



Electric Vehicle Motor and Control System (EVMCS)

Certification Level : 2 Duration: 120 hours

HYBRID

Electric Vehicle Powertrain and Embedded System (EVPES)

Certification Level : 2 Duration: 120 hours

HYBRID

Lithium Battery Pack Design and Development (LIBDD)

Certification Level : 2 Duration: 120 hours

HYBRID

Electric Vehicle Technology Design and Testing (EVTDT)

Certification Level : 2 Duration: 120 Hours

25+
Programs for OEMs workforce knowledge, skill and capability development in EV and future technologies.

Click to download program list

Building diversified capability in EV and Future technology with Partners collaborations

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Alliance for an Energy Efficient Economy

- EV policy and white paper report development for policy linked businesses
- Skill centre development

SJT xEV
SJT Electric Vehicles

- Retrofication of ICE vehicles (4 wheelers)

advandes

- Design and Prototyping,
- Teardown Benchmarking and Documentation

Fuelout TECHNOLOGIES
SWITCH TO GREENER WORLD

- Battery pack development, testing and assembly line setup for EV and ESS applications
- Second life of Li-battery cells

micelio
The Network That Drives You

iASYS
Integrating Knowledge & Technology

- For testing lab and reports

Building diversified capability in EV and Future technology with Partners collaborations

1 EV Teardown and Benchmarking Study

Ather 450X

Ola S1 Pro

TVS iQube

TATA Nexon EV

- Vehicle performance specification sheet
  - Segment comparison and placement
- Vehicle Disassembly
  - Complete
- Bill of materials preparation
- Components identification
  - Specifications mapping
- Suppliers identification
- Chassis design study, material testing and architecture style reverse
- Motor teardown and benchmarking
- Overall vehicle wire-harness benchmarking
  - Connectors and cables identification
- Battery teardown analysis
- Over-all powertrain and electrical layout determination

Building diversified capability in EV and Future technology with Partners collaborations

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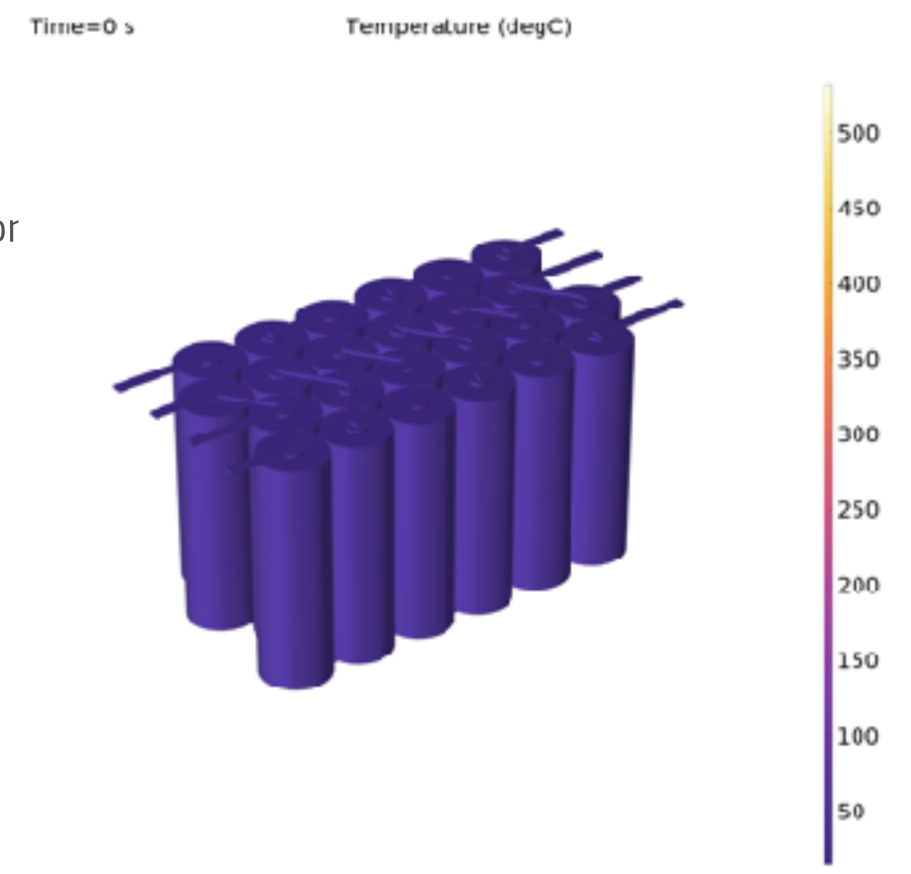
advandes

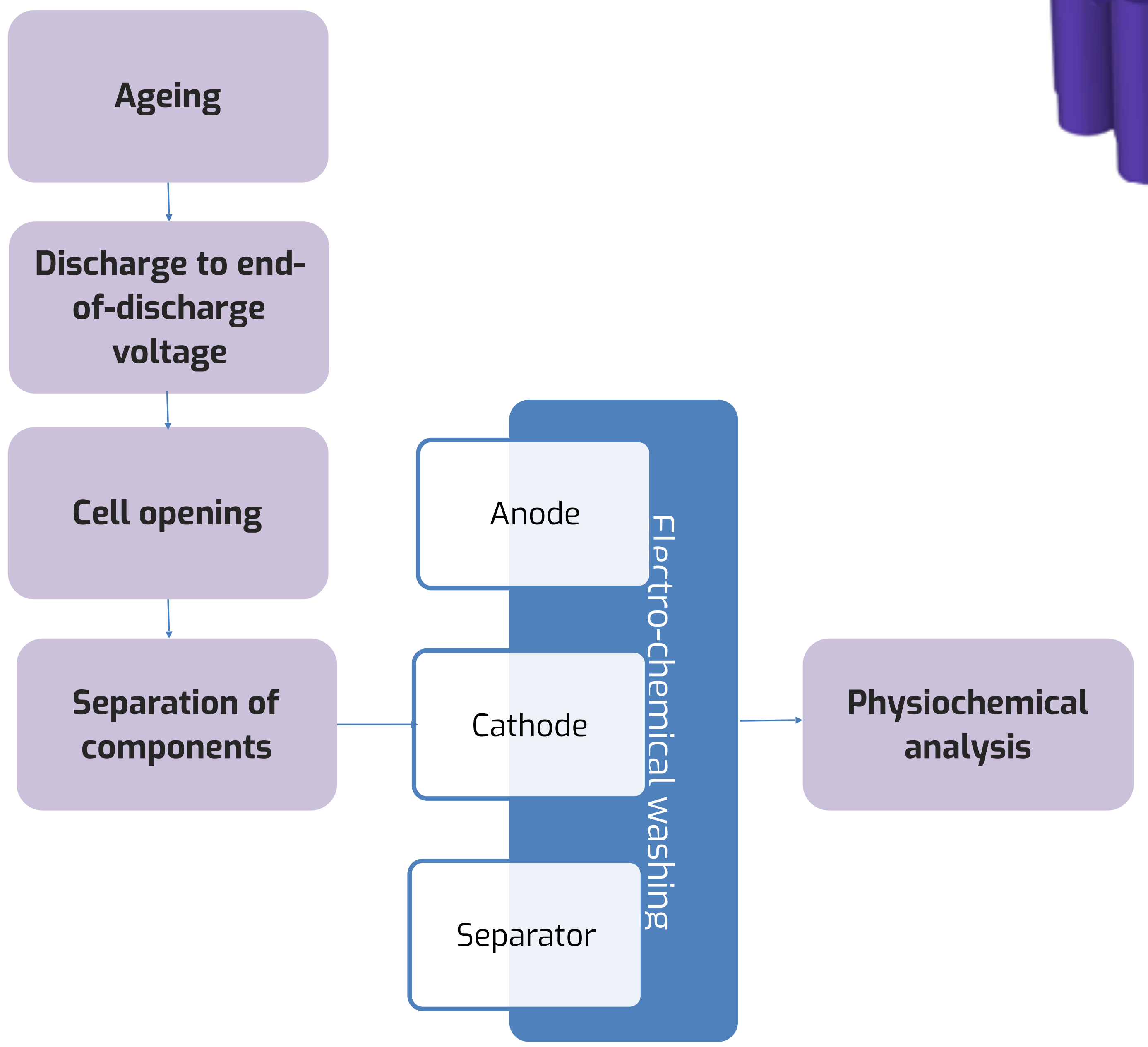
2 Battery Teardown Analysis

Cell and chemistry identification
- 18650 / 21700 classification
- Nominal voltage of cells identification – Full SoC to end discharge voltage identification
- Cell arrangement matrix identification – Total voltage and energy calculations in reverse
- BMS identification

Thermal Management
- Thermal runaway control methods
- Heat exchanger circuit reverse engineering
- Condenser, pump and compressor thermodynamic calculation
- Coil integration in stack reverse engineering



Battery Design and integration analysis
- Battery sizing – Watt hour per km estimation
- Connectors and cable selection reasoning
- Cell selection and integration methodology
- BMS parameters
- Thermal management logic understanding

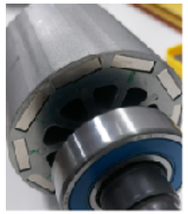


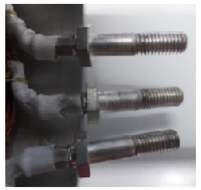
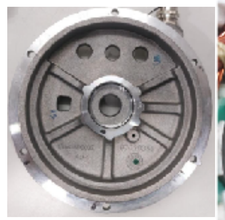
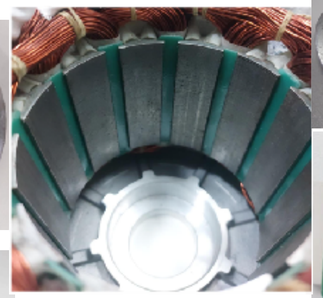
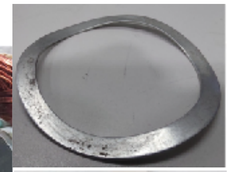
Cell and Module Arrangement
- Battery cell chemistry identification – NMC, LFP etc.
- Battery cell size and nominal voltage identification
- Cell stacking – series and parallel as per requirement
- Modules stacking identification and reverse engineering

Read BMS electronically and attempt to identify control logic
- Thermal control algorithm
- Active and Passive cell balancing method understanding
- SoC and SoH monitoring logic and methods determination

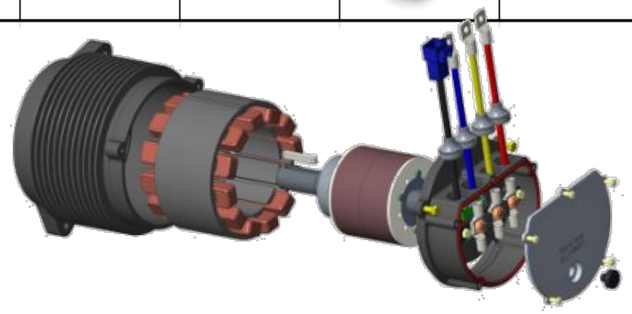
Building diversified capability in EV and Future technology with Partners collaborations

3 Motor Teardown for Benchmarking


Motors Performance Benchmarking							
Sl.no	Type	Parameter	Unit	Mecwin	Mahle	SEG	Lucas TVS
1	Performance	Max power	kW	5	6	5	5
2		Rated power	kW	3	3	3.3	3
3		Max torque	Nm	-	20	38 @300A	20
4		Rated torque	Nm	-	-	-	-
5		Effeciency	%	>90	-	>92	-
6		Max speed	rpm	-	9000	4500	-
7		Voltage	V	48-72	24-80	48	48
8	Mechanical	Weight	Kg	13	6.5		8
9		IP grade	-	IP67		IP67	IP 67
10	Dimension	Diameter	mm	128	133	145	152
11		length	mm	65	158	178	162
12		Noise level	dB	<60	-	-	-
13	cooling	type	-	Air	Air	Air	Air
14	Sensor	type	-	Encoder	-	Encoder	-
15	-	Picture	-				

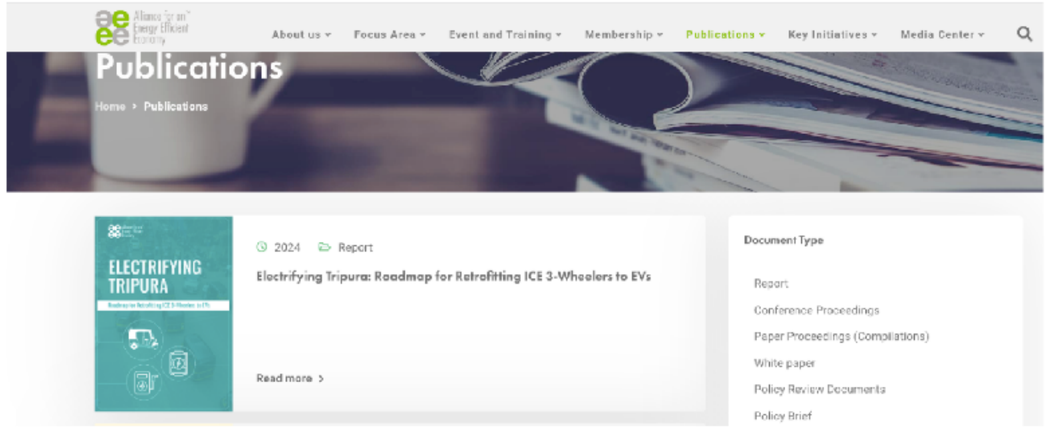



Building diversified capability in EV and Future technology with Partners collaborations

4

Electrifying Northeast - State Government Policy and White paper for Electrification of Transportation system

- Policy and stakeholders consultation
- Technical advisory
- Market research
- Financial modelling
- Workshops



Our Capability Partners

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ELENO®

micelio
The Network That Drives You

DRDO
VRDE

ARAI
Progress through Research

CIRT
Excellence in Transport

AVL

intertek
Total Quality. Assured.

ICAT
Innovation • Service • Excellence

Autobot India is Trusted By

AUTOBOT INDIA
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TATA
TATA TECHNOLOGIES

MAGNA STEYR

TVS

ACMA

RENAULT NISSAN

DENSO

ASHOK LEYLAND
Aapki Jeet. Hamari Jeet.

Alliance for an Energy Efficient Economy

Mercedes-Benz

HYUNDAI MOBIS

KPIT

TAFE

TATA

Hero

JOHN DEERE

DAIMLER

MAHLE

Capgemini

एनटीपीसी
NTPC

FCA
FIAT CHRYSLER AUTOMOBILES

BOSCH

Autobot India is Transforming Industry Workforce

Helping industries to upskill their manpower to become future ready to make india **#EVnation**

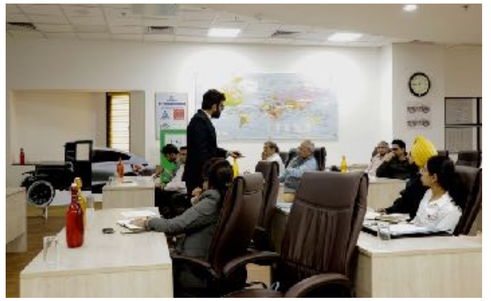
ARAI
Progress through Research

एनटीपीसी
NTPC

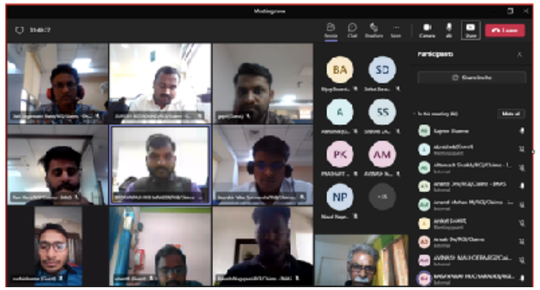
Autobot India is Transforming Industry Workforce

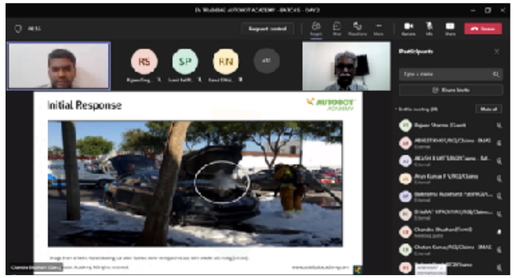
Helping industries to upskill their manpower to become future ready to make india **#EVnation**

ACMA
Automotive Component Manufacturers Association of India



RELIANCE GENERAL INSURANCE





Autobot India is Transforming Industry Workforce

Helping industries to upskill their manpower to become future ready to make india **#EVnation**

TATA MOTORS

TVS

Autobot India is Transforming Industry Workforce

Helping industries to upskill their manpower to become future ready to make india **#EVnation**

FCA
FIAT CHRYSLER AUTOMOBILES

MAGNA STEYR

Autobot India is Transforming Industry Workforce

Helping industries to upskill their manpower to become future ready to make india **#EVnation**

JOHN DEERE

Hero

And many more…

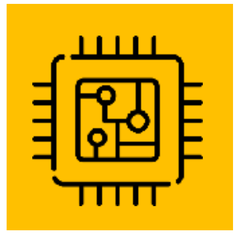
Autobot India is Empowering Government in Electrification

Helping government towards policy implementation and EV ecosystem empowerment to achieve **#ZeroEmission.**

Alliance for an Energy Efficient Economy™

MTC
Meghalaya Transport Corporation

Why to Prefer Autobot India as EV Technology Learning Partner?



Expertise

- India’s first and oldest EV training and development company
- In-house domain expertise in Battery, Powertrain and Electronic Systems
- 52+ Panel of Experts onboard having at least 10+ years of core EV industry experience
- Collaboration for EV Technology Excellence Learning
- Network of 120+ trainers across India for facilitating EV training

Exposure

- To industry best practices and latest technology upgradation in syllabus
- To all electric vehicle applications (2/3/4) under one roof
- Hands-on leaning eco-system
- Live projects
- Real world changes and solutions

Experience

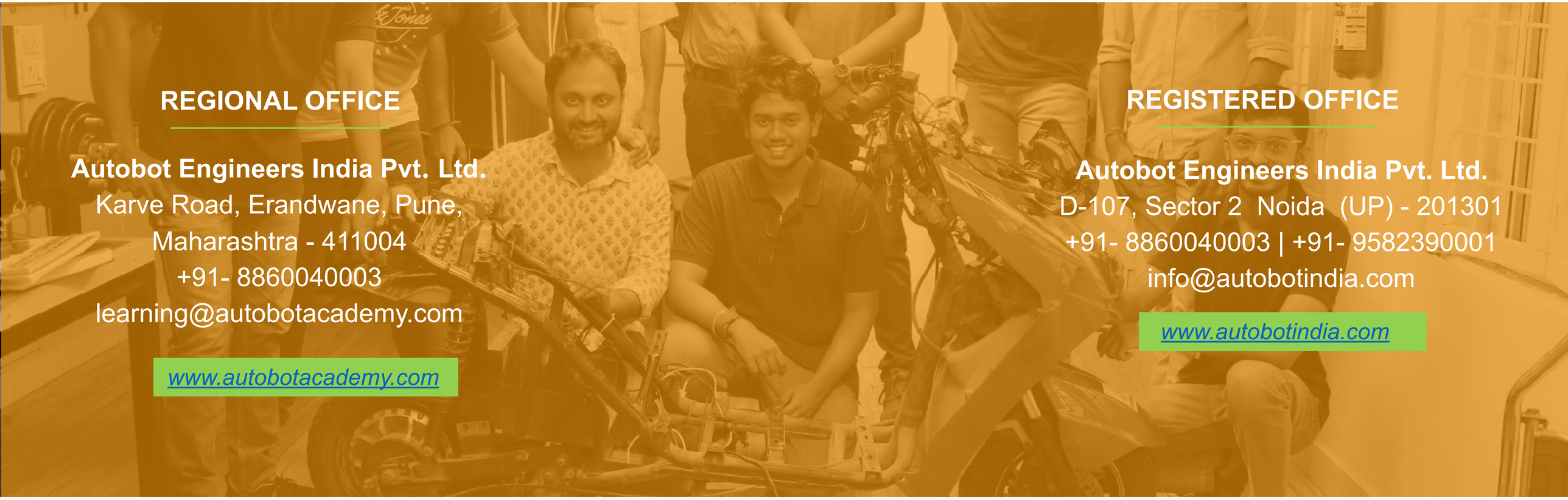
- Cognitive learning approach towards EV and new technologies
- Seamless integration of learning, training and development
- First hand experience on real world EVs and learning about its tech and challenges
- Journey with Autobot for acquiring knowledge and skill
- Development of self-confidence in EV Technology development

#JoinTheMovement

with

AUTOBOT® INDIA

inspiring ages



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