One Day Professional Development Program on
AUTONOMOUS VEHICLES - ONE DAY BOOT CAMP

A One Day Professional Development Program on
“Autonomous Vehicles - One Day Boot camp”, was
organized by SAEINDIA BS with Support from SAEINDIA,
on 17th Dec 2022 at HAL Management Academy - Banga-
lore. Professionals from the Industry in overall Section
Were Invited for this program. We had an over whelming
response (38 Delegates), for this Professional Develop-
ment Program.

17th Dec 2022

Inaugural Function:

The Inaugural Function Started with the Introduc-
tion of Chief Guest and other dignitaries on the dais, by
Mr. Damodaran Subramanian, Chairman – SAEINDIA
Bangalore Section.

The Program was Inaugurated by Mr. Damodaran
Subramanian, Chairman – SAEINDIA Banga-
lore Section; Mr. Vijai Gopalakrishnan, Engi-
neering Group Manager at TCS, Bangalore;
Dr. G. Srikanta Sharma, Dean and Executive Director,
HAL Management Academy.

The Welcome speech was given by Mr. Damodaran
Subramanian, Chairman – SAEINDIA Bangalore Section.
It was followed by Dr. G. Srikanta Sharma, Dean and
Executive Director, HAL Management Academy, who gave
an introduction about the HAL Management Academy.
EVENT Report

Session 1:

Conducted by Mr. Vijai Gopalakrishnan, Engineering Group Manager at TCS, Bangalore.

Topic: Introduction and Understanding SAE Specifications for Autonomous Vehicles (AV)

Mr. Vijai Gopalakrishnan explained the below titles:

- Taxonomy and Definitions for Terms Related to Driving Automation Systems
- Understand Driver Assistance, Partial Driving Automation, Conditional Driving Automation, High Driving Automation and Full Driving Automation
- SAE Framework for Autonomous Vehicle Levels
- Role of human Driver, Role of Automation
- Driving Tasks
- Must-know terms (Operational Design Domain, etc)

• What combinations lead to what level of Autonomy?
• We will understand with real world examples and what complexities lie in achieving higher level automation

Session-2: AV functionality exploration with MathWorks Tools (2:00 PM - 5:00 PM)

Speakers: Dr. Rishu Gupta, Principal Application Engineer at MathWorks. Mr. Munish Raj, Autonomous Driving Application Engineer at MathWorks

Automated Driving applications integrate multiple systems performing complicated tasks. Automated driving functions need to be validated in accordance, with the European New Car Assessment Programme (Euro NCAP®) test protocol standards. MathWorks tools enable users to author scenarios, design and develop algorithms, create and manage test cases and analyze the results after simulation.

In this session, we explore how a user can build an end to end closed loop validation framework, to analyze and test the performance of an automated driving feature.
**Event Report**

- **Application**: Automated Emergency braking
- Define requirements for an Automated Emergency braking
- Discuss a Euro NCAP scenario for AEB testing
- Author a Euro NCAP scenario using Roadrunner
- Explore the Automated Emergency Braking Algorithms (**Perception, Sensor Fusion, Control Design**)
- Build the Test bench for Automated Emergency braking
- Analyze the performance of the Automated Emergency braking algorithm

Vote of Thanks:

Vote of Thanks was Proposed by Mr. Vijayalayan R, MC SAEINDIA Bangalore Section - MC Member. He thanked all the Speakers, Dignitaries, PDP Teams, Organizing Committee Members and Participants.

**END OF THE EVENT REPORT**