



AI, GenAI & Agentic AI for Automotive Leaders and Developers

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Generative AI

Gen-AI

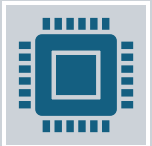
Prerequisites



Basic knowledge of Python (functions, control flow)



Familiarity with automotive workflows,



systems, and product lifecycles



Lab Setup Requirements



Laptop with Python 3.10+, Jupyter Notebook, VS Code



Libraries: numpy, pandas, scikit-learn, matplotlib, openai, langchain, chromadb



Access to Azure OpenAI or Google Gemini APIs



Internet connectivity, Excel, and sample automotive datasets



Trainer Deliverables



Pre-reading PDFs on AI, GenAI, Prompting



Setup guide for labs (for technical team)



Sample notebooks and visual examples



Hackathon guidance



Final review and open Q&A

Program Outcomes for Management Teams



Clearly understand AI, GenAI, and Agentic AI in business context



Evaluate where to invest in AI inside your automotive enterprise



Identify use cases with measurable ROI



Build leadership confidence in leveraging AI responsibly



Align technical and business teams on AI vision

Day-Wise Outline



Day 1: AI/ML/DL – Foundation for Automotive Innovation



Day 2: AI Leadership, Risk Management & Storytelling with Data



Day 3: Generative AI and Document Automation



Day 4: Strategic Thinking – Competing in the AI Age



Day 5: Introduction to Agentic AI and Innovation Hackathon

Day 1

AI/ML/DL – Foundation for Automotive Innovation



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graph TD; A[AI/ML/DL – Foundation for Automotive Innovation] --> B[Objective]; B --> C[Provide leaders]; C --> D[Understanding of AI, ML, DL]; D --> E[Applications in automotive.]
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Objective

Provide leaders

Understanding of AI, ML, DL

Applications in automotive.

Day1

What is AI, ML, DL

Definitions and Differences

Use of AI in Automotive

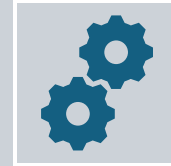
Safety, Maintenance, Manufacturing

Python Libraries Overview

Day1 (Cont.)



Use Case: Predictive Maintenance using sensor data



Demo: Build a basic model that predicts EV motor failure



Case Study: AI Use in Tesla, BMW, Toyota



Demo Focus: How AI predicts problems before they happen

Day 2



AI Leadership, Risk Management &



Storytelling with Data



Objective: Help managers understand



how to make decisions around



AI adoption, investment, and governance.

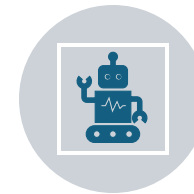
Day 2



AI Investment: Cost
vs ROI



Risks in AI: Bias,
Ethics,



Compliance (GDPR,
ISO, AIS standards)



Impact on Jobs:
Reskilling, Workforce
Transformation



**Data Visualization
for Decision Making**

Day 2



WORKSHOP:



AI READINESS
CHECKLIST



FOR AUTOMOTIVE
PROJECTS



GROUP DISCUSSION:
SHOULD YOUR NEXT
PROJECT USE AI?

Day 3



Generative AI and Document Automation



Objective: Simplify GenAI and LLMs



For creating documents, manuals,



Customer communication.

Day 3

What is Generative AI (vs Traditional AI)

LLMs: GPT, Gemini, Claude

What leaders need to know

Prompt Engineering:

Asking the right questions to the AI

Day 3



Use Case: Auto-generate driver manuals



from technical specs



Demo: Prompt Gemini



to create onboarding documents



Case Study: Using GenAI



for multilingual manual generation

Day 4



Strategic Thinking – Competing in the AI Age



Objective: Help business and tech leaders



think strategically about AI disruption.

Day 4

New Business Models Enabled by AI

(MaaS, Digital Twins) Competitive Threats

from Startups and Big Tech

Industry Case Study

How top auto companies are using AI

Day 4

Workshop: Strategy Simulation

EV OEM Disruption Response

Team Activity:

Build vs Buy vs Partner Decision Framework

Day 5



Introduction to Agentic AI and



Innovation Hackathon



Objective: Introduce leaders to AI agents and



how they automate decision-making and tasks.

Day 5



What is Agentic AI (Simple Explanation)



Agents, Planners, Executors



Business Role View



Popular Tools: AutoGen, LangGraph



(only conceptual overview)

Day 5



Use Case: AI Assistant for Vehicle Configurations



Demo: Ask an AI agent about car specs



and receive tailored suggestions



Mini Hackathon: Team showcase of AI ideas



(no coding required for leaders)

Happy Learning@!!
Thanks for Your
Patience 😊

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GKTCS Innovations

