Automotive, IoT & Embedded Engineers

Domain Specialization & Project Expertise

Automotive, IoT & Embedded Engineers Domain

Every engineering area has a broad range of applications, resulting in technology overlap. Any car is the result of many distinct technical disciplines coming together to create an interesting piece of equipment.

The automotive sector, like aerospace, marine, rail, and construction equipment, is a subset of transportation engineering. It is essential to have in-depth understanding of different areas in the business in order to create world-class goods. Noise, Vibration, and Harness (NVH), Computational Fluid Dynamics (CFD), Vehicle Structure and Crashworthiness, and Powertrain and Durability are four important areas of automotive development. Automotive body and interiors is another sector that is often linked with CAD software.

The next Industrial Revolution is being sparked by the Internet of Things. The convergence of various technologies working together in harmony to solve a real-world business issue or allow new goods and services is at the heart of the Internet of Things.

Automotive, IoT & Embedded Engineers Domain

✓ An Embedded Systems Expert will be responsible for working on contemporary processor, network, and sensor architecture, as well as evaluating and optimising embedded hardware and software architectural programmes in an embedded system environment.

✓ Domain-based training focuses on a particular sector of an industry in order to offer training in different engineering disciplines in accordance with current industry developments.

✓ A frequent issue is that the different actors in the IoT ecosystem see the IoT technology stack from their own unique viewpoint, which causes the audience to get confused. "What is the connection between IoT, cloud, analytics, and data science?" you may wonder. " This is still a popular query! This course clears up the misunderstanding by giving a primer on the fundamentals of all four levels of the Internet of Things, from sensor-connected IoT devices or "Things" through IoT gateways and cloud platforms, as well as information on data production and analysis.

Learn Advance Tools & Technique

Crack coding interviews of product-based companies
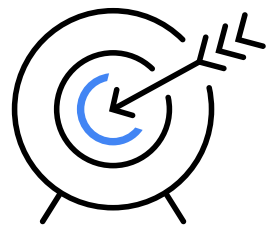
Work with real time projects through-out the elective

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Automotive, IoT & Embedded Engineers Domain

The fields of data science and artificial intelligence use a wide range of approaches, including statistical analysis, modelling, machine learning, and data mining, to help us forecast the future.

Who should join?

- 1+ Years of Experience in IoT or Embedded domain.
- 1+ Years of Experience in Automotive industry.
- Someone who is interested in switching their domain to Automotive, IoT or Embedded Domain.
- Managers and leaders associated with Automotive, IoT & Embedded System who want to incorporate future proof and data-driven newfangled practices into the existing business operations.

Why domain specialization?

- Data science skill efficacy is all about using your domain-specific knowledge in a balanced way using data-driven methods.

- As a result, if you don't have domain expertise, your data science abilities are useless.

- Even so, these are the main reasons why experienced workers seeking career changes are in greater demand.

Electives Pre-requisite:
Professionals having 1+ year of experience in Automotive, IoT & Embedded System domain. Or professionals interested in learning about the newest technology, data science and artificial intelligence techniques that drives strategic development.

NO background in programming or statistics required.

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Tools & Modules

TERM 1 & 2

Python

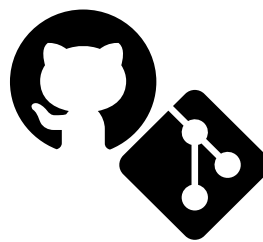**Statistics**

Machine Learning

Deep Learning (Tensorflow)

Time Series Analysis & Forecasting

Natural Language Processing

Git & GitHub

R Programming

TERM 3 & 4

Reinforcement Learning

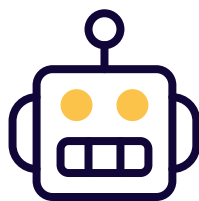**Open CV**

Pytorch

Keras

Google Cloud

Advance AI

Project Expertise

Elective - Automotive IoT Embedded

Program RoadMap

100% Interview Guarantee in Product based MNCs

5

4

Job Preparation
(Resume Build- Up, Mock Interview, Job Referrals)

Work on Real Time Projects and Domain Specific Capstone project

3

Analyze your knowledge and interest towards any 2 domain from Domain Electives

2

1

Complete General Program (Term 1 to 4) Core + Advance Modules & Tools

Main Brochure

What will you learn :

In Automotive, IoT & Embedded Engineers Domain

After this module training, you will be able to -

- Understand problem statements and make design decisions on your own.

- Design, develop, test, and manage a first-generation analytical software application.

- Develop a comprehensive understanding of the role of analytics in IoT.

- Develop a An understanding of IoT Data reference architecture.

- Use raw, unstructured data to prepare actionable plans.

- Use predictive analysis to solve operational issues like- increased cost and uptime, and so on.

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Domain Training

15 hrs | 2 weeks

Module 1 - **Understanding Automotive domain & Role of Data Science in Automotive Industry**

- How Data Science can improve Product Development?

- How Data Science can help in creating Connected and Automated Vehicles?

- How product development can be improved using Data Science?

- Modelling and Valuation of Leasing contracts

- Revenue forecasts in Vehicle Financing

- Interactive Analysis for used car Warranties

- Algorithmic grouping of motors via cluster analysis

- Dimensional reduction via Principal Component Analysis (PCA)

Module 2 - **Understanding IoT domain & Role of Data Science in IoT**

- Introduction to IoT, IoT Networking and Communications

- Basic of IoT cloud solutions, deployment models, OSI layers, network topologies, and connection types and their characteristics

- Understanding IoT analytics framework such as data collection, data cleaning, EDA, data preparation, and analysis are known

- How automated decision and control can be done with IoT technologies

- Research the link between data science and natural language processing and visual and auditory content.

- To provide a framework for analyzing and explaining various visualization methods, reviews basic concepts including visual feature extraction, content categorization, and high-dimensional indexing

- Many problem-solving techniques from the online search engine industry, facial recognition, product copy detection, mobile product search, and security surveillance may be used in web-scale picture search engines.

Domain Training

Module 3 - **Understanding Embedded Domain and Role of Data Scientists in Embedded industry**

- How Data Science can improve Product Development?

- How Data Science can help in creating Connected and Automated Vehicles?

- How product development can be improved using Data Science?

- Modelling and Valuation of Leasing contracts

- Revenue forecasts in Vehicle Financing

Capstone Projects :

- **Revenue Forecasts in Vehicle Financing**
  1. To what extent is the likelihood that enquiries result in contracts significant?
  2. How long does it take for a potential customer to respond to a promotion?

- **Modeling and Valuation of Leasing Contracts**
  1. What will the vehicle's worth be at the end of the contract?
  2. The contract or car elements that have the greatest impact on residual value
  3. In order to cover risks, how much must be retained?

- **Interactive Analysis for Used Car Warranties**

- **Anomaly Detection - Robust PCA + Univariate TS**

- **IoT Sensor Failure Detection**

FAQ's

+ Can I select multiple domain electives?

- You can select multiple electives based on your career goal and work experience/academics.

+ What if I don't have any prior experience in any domain?

- Even if you don't have any prior experience, you can still opt for any elective to gain Domain Expertise and work on Real - Time Industrial Projects.

+ Can I change my domain electives later ?

- Yes, you can change your elective or repeat the training later within the Course Accessibility Duration.

+ Are there any additional charges for electives?

- No, there are no additional/ hidden charges.

+ How many capstone projects do I need to work?

- You can work on all projects, or depending on your experience and goal. For eg, Having 1-2 yrs of experience you must work on 4-5 projects.

Note: We keep updating trending projects and case - studies as per the market/company requirement. You can also Bring your own project.

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YouTube | **Subscribe to our YouTube Channel and Watch Full Tutorial of Domain Specific Projects, Guided by Industrial Experts**

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