

| Course Catalogue                                |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |
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| SI No                                           | Training                                                     | Course Overview                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Duration |
| <b>Artificial Intelligence ( ML/DL)</b>         |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |
| 1                                               | Machine Learning Internals                                   | This training session provides a deep dive into machine learning, datamining, and statistical pattern recognition. Topics include: (i) Supervised learning (parametric/nonparametric algorithms, support vector machines, kernels, neural networks). (ii) Unsupervised learning (clustering, dimensionality reduction, recommender systems, deep learning). (iii) Best practices in machine learning (bias/variance theory; innovation process in machine learning and AI).                                                                                                                                                                         | 4        |
| 2                                               | Deep Learning Internals                                      | In this training session you will build deep learning models using neural networks, explore what they are, what they do, and how. To remove the barrier introduced by designing, training, and tuning networks, and to be able to achieve high performance with less labeled data, you will also build deep learning classifiers tailored to your specific task using pretrained models, which we call deep features.                                                                                                                                                                                                                               | 5        |
| 3                                               | Deep Learning with Computer Vision                           | In this training session you will build deep learning models for Computer Vision. One the detailed case study will be using attention based mechanism to do image segmentation and object recognition. Another detailed case study would be image captioning and understanding using a combination attention based CNN and sequence based model(LSTM).                                                                                                                                                                                                                                                                                              | 3        |
| 4                                               | Modern Natural Language Processing ( NLP) with Deep Learning | This session is targetted to data scientists, with a technical background in computation, including, post-doctoral researchers, educators, and industrial researchers and anyone interested in getting up to speed with the latest techniques of deep learning associated with NLP. This is an advanced course on natural language processing. Automatically processing natural language inputs and producing language outputs is a key component of Artificial General Intelligence. The ambiguities and noise inherent in human communication render traditional symbolic AI techniques ineffective for representing and analysing language data. | 3        |
| 5                                               | Machine Learning with Python                                 | Machine Learning with python course delves deeper into the Machine Learning fundamental concepts further explaining Machine Learning algorithms and their implementation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2        |
| <b>Big Data / Analytics/ Data Visualization</b> |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |
| 5                                               | Advnce Hadoop and Map Reduce                                 | This training will introduce attendees to the core concepts of Hadoop. Deep dive into the critical architecture paths of HDFS, MapReduce, Oozie and HBase. It will explore the concepts of YARN and TEZ in great depth. TEZ is the new engine being utilized in MR, Hive and Pig. It incorporates many novel concepts. It will also explore the depths real time searches in theory and practice with a Real case Study                                                                                                                                                                                                                             | 4        |
| 6                                               | Spark 2 Internals and performance Tuning                     | Internals of Spark 2.0 is explored in great detail. Programming paradigm of spark is given due importance. RDDs are compared to Dataframes and Data set. High performance programming patterns are explored with complex problems. For example, how to take advantage of copartition and colocation. Another example is against the grain Spark programming using the powerful Iterator to Iterator Spark Programming. All of this on a proper cluster on cloud. Most importantly how does it interact with other components like Cassandra, HBase, Mongo, Kafka etc                                                                                | 4        |

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| 7             | Big Data Hadoop for Developers        | This training will introduce participants to the core concepts of Hadoop, HDFS, YARN, TEZ and some big data specific tools like Hive and Pig, Sqoop etc of Hadoop Stack and Spark Core, Spark SQL and Spark Streaming from Spark Stack also covering the Development API techniques. The concepts will be presented in a clear and detailed ways.                                                                                                                                                                                                                                                                                                                                        | 5 |
| 8             | Apache Kafka Flume                    | Apache Kafka provides a unified, high-throughput, low-latency platform to handle real-time data feeds. This training will show how to build and use Kafka Cluster efficiently, and contains practical solutions to the common problems that developers and administrators usually face while working with it. This course guides you on designing and architecting enterprise-grade streaming applications using Apache Kafka and includes best practices for building such applications, and tackles some common challenges such as how to use Kafka efficiently and handle high data volumes with ease followed by giving you a thorough explanation as per our project specifications | 4 |
| 9             | Apache Casandra                       | Starting from installing Cassandra and creating your first keyspace, to mastering the different table structures Cassandra offers and exploring the latest and most powerful features of the Cassandra Query Language, CQL3, this Training explores each topic through the lens of a real-world example application. With plenty of examples, tips, and clear explanations, participants will master compound primary keys, collection columns, lightweight transactions, and many other advanced aspects of Cassandra                                                                                                                                                                   | 5 |
| 10            | QlikView                              | At the end of this training course, the participants will: a) Data and BI visualization with QlikView b) Creating different types of charts and integrating them in dashboard for analysis c) How Qlik reads data from various tables d) Chart-level and script-level Qlik functions e) Developing a real-time project using QlikView                                                                                                                                                                                                                                                                                                                                                    | 3 |
| 11            | Tableau                               | At the end of this training course, the participants will: a) Master data sources and data blending, create data extracts and organize and format data b) Become an expert on visualization techniques such as heat map, tree map, waterfall, Pareto, Gantt chart and market basket analysis c) Master Special Field Types and Tableau Generated Fields and the process of creating and using parameters d) Learn how to build interactive dashboards                                                                                                                                                                                                                                    | 3 |
| 12            | Power BI                              | At the end of this training course, the participants will: a) Perform Power BI desktop data transformation b) Describe Power BI desktop modelling. c) Create a Power BI desktop visualization d) Implement the Power BI service e) Describe how to connect to Excel data f) Describe how to collaborate with Power BI data g) Connect directly to data stores                                                                                                                                                                                                                                                                                                                            | 3 |
| <b>DevOps</b> |                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |
| 13            | Devops – Continuous Integration Track | This training program introduces developers to the Continuous Integration/Continuous Delivery best practices they should incorporate. E.g. docker and containers, version controlling the code, setting up CI workflows, automated testing and deployment etc                                                                                                                                                                                                                                                                                                                                                                                                                            | 3 |
| 14            | Chef (Adv)                            | Objective of this course is to introduce students to what Chef is, make them familiar with the core concepts, Master/Agent and Standalone modes, teach them how to write Chef Cookbooks and Recipes and help them get started writing Infrastructure as a code. This course also delves into advanced topics such as LWRP, Plugins, Berkshelf, Test-kitchen, Foodcritic, Cucumber-chef etc                                                                                                                                                                                                                                                                                               | 3 |

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| 15                             | Puppet                                                  | Objective of this course is to introduce students to what Puppet is, make them familiar with the core concepts, Master/Agent and Standalone modes, and help them get started writing Infrastructure as a code                                                                                                                                                                                                                                                                                                                                                                                                                        | 3 |
| 16                             | Ansible ( Adv)                                          | This course is for Ansible Practitioners who are familiar with the basics of Ansible and writing playbooks and roles etc. This is intended to provide them with a deeper dive into Ansible's advanced features, as well as to gain in depth knowledge of integrating with various virtualization and cloud platforms, extending Ansible by creating custom modules etc                                                                                                                                                                                                                                                               | 3 |
| 17                             | Docker and Kubernetes                                   | This hands-on training will introduce participants from the core concepts of Container Technology with Docker and then to advanced Application deployment concepts on Kubernetes. Kubernetes is an open source system that is used to automate the deployment, scaling, and management of containerized applications. If you are running more containers or want automated management of your containers, you need Kubernetes at your disposal. While Kubernetes has greatly simplified the task of deploying containerized applications, managing this orchestration framework on a daily basis can still be a complex undertaking. | 5 |
| <b>Cloud</b>                   |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
| 18                             | AWS Developer Training                                  | AWS Developer course is designed for anyone who wants to become an AWS certified architect. Learn the foundations of cloud computing, storage, and networking on AWS with this AWS development training                                                                                                                                                                                                                                                                                                                                                                                                                              | 2 |
| 19                             | Google Cloud Platform                                   | This training provides an overview of Google Cloud Platform products and services. Participants learn the value of Google Cloud Platform and how to incorporate cloud-based solutions into business strategies                                                                                                                                                                                                                                                                                                                                                                                                                       | 3 |
| <b>Web Development /Mobile</b> |                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
| 20                             | React.js, Redux, Relay & GraphQL (with ES6 and Webpack) | Explore the basic architecture of a React.js application. At the end of this training course, the participants will: a) Understand what React.js is and what problem it solves b) Explore the basic architecture of a React.js application c) Gain a deep knowledge of React.js components and JSX d) Build a working application that uses React.js's components e) Compose an application using Flux architecture f) Know how to maintain application state in a Redux Store                                                                                                                                                       | 3 |
| 21                             | Patterns for Large Scale JavaScript Applications        | At the end of this training course, the participants will: a) Understand and appreciate the dynamic typed nature of JavaScript language b) Be able to understand and exploit some of the functional programming techniques in JavaScript c) Know how to modularize and load JavaScript files using Require.js d) Learn framework building techniques                                                                                                                                                                                                                                                                                 | 3 |
| 22                             | Building RIA using Angular 5.0 & Typescript             | At the end of this training course, the participants will: a) Be able to build RIA using Angular 5.0 b) Be able to write front end applications using TypeScript c) Exploit two-way binding offered by Angular d) Understand and use various directives offered by Angular e) Use gulp for commonly performed tasks in JavaScript application development                                                                                                                                                                                                                                                                            | 3 |
| 23                             | Building Server Applications using Node.js              | At the end of this training course, the participants will: a) Understand the non-blocking nature of Node.js b) Writing asynchronous code with callbacks and streams c) Learn how to modularize code using NPM and require() d) Understand and take advantage of the built-in APIs for building scalable few applications e) Understand how to handle authentication and authorization f) Learn how to build real-time applications using WebSockets and socket.io                                                                                                                                                                    | 3 |

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| 24                 | Programming with ECMA Script                                    | ECMAScript is the specification for Javascript implementation by popular vendors including browsers and NodeJS. Ever since ECMA took this responsibility, several versions of the specification have been released, and recently it became an annual affair. ES9 or ECMAScript 2018 is the latest release. As vendors take time to implement the specifications, several tools emerged to transpile the code into most widely implemented ES5 version. This intense hands-on program is aimed at building skills in programming with the features of ES6, ES7 and ES8 | 3 |
| 25                 | Building Reachable UI Presentation Layer using ASP.Net Core MVC | The ability to develop web applications that are highly efficient but also easy to maintain has become imperative to many businesses. ASP.NET Core 2.0 is an open source framework from Microsoft, which makes it easy to build cross-platform web applications that are modern and dynamic. This Training will take you through all of the essential concepts in ASP.NET Core 2.0, so you can learn how to build powerful web applications.                                                                                                                          | 4 |
| 26                 | Microservices                                                   | The objective of this training is to help learners understand the importance of microservice architectures, issues in developing/managing monolithic applications, common pitfalls migrating from monolithic to microservices architectures and the challenges faced by dev & ops in managing such applications. We also discuss common microservices architectural patterns, devops practices, operational readiness and 12 factor application development in the context of microservices.                                                                          | 5 |
| <b>Database</b>    |                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |
| 27                 | Apache Casandra                                                 | At the end of this training course, the participants will: a) Architecture and data model of Cassandra b) Installation, configuration, and monitoring of Cassandra c) Hadoop ecosystem of products around Cassandra d) Deploying NoSQL database solutions using Cassandra                                                                                                                                                                                                                                                                                             | 2 |
| 28                 | MongoDB                                                         | At the end of this training course, the participants will: a) • Understand Mongo as a data store b) • Be comfortable with Mongo's query and update languages c) • Work with the common use-cases and architectures of Mongo d) • Use Mongo's built-in JavaScript interpreter e) • Query Mongo using Mongo's JSON-based query language F) • Handle data with Mongo's built-in MapReduce capabilities                                                                                                                                                                   | 2 |
| <b>Programming</b> |                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |   |
|                    | GoLang Foundation                                               | This covers the basics with respect to the programming language. If attendees indicate sufficient knowledge on these topics from other languages, we'll move through this faster. However, some items like slices, maps, defer, etc. are different in Go compared to other languages and they will be covered                                                                                                                                                                                                                                                         | 3 |
|                    | GoLang Advaced                                                  | Cover various areas and applications of GoLang like web programming, using databases, json/xml/REST/RPC, deploying on Docker, etc                                                                                                                                                                                                                                                                                                                                                                                                                                     | 3 |
| 29                 | Python                                                          | a) Gain in-depth understanding of Python's architecture, memory models, object-oriented features, input and output details: stdio and file io b) Master Python's simple and robust error handling methods c) Implement flexible function protocols d) Leverage built-in data types: Using them and inheriting from them in classes you design                                                                                                                                                                                                                         | 3 |
| 30                 | Advanced Python                                                 | At the end of this Advanced Python training course, you will be able to: a) Process text using regular expressions b) Leverage OS services c) Implement GUI for your Python application d) Implement GUI for your Python application                                                                                                                                                                                                                                                                                                                                  | 2 |

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| 31            | Java 8 New Features                                        | At the end of this training, participants will be able to: a) Describe Functional Interfaces and Lambda Expressions b) Apply Lambda Expressions with Collection Streams and Filters C) Interpret Built-In functional interfaces in Java 8 d) Demonstrate Concurrency Enhancements in Java 8 e) Illustrate File NIO with Lambda Expressions f)                                                                                                                                                                                                    | 2 |
| 32            | Enhancements in Java 9, 10 and 11                          | Introduce new features of Java 9 - JPMS - the module system and how you can take leverage on these new features in enterprise java application. Understand the inner nuances of the G1 collector so that you can make sense of what is going on in a running a VM and other useful enhancements such as JShell, Multi release jars, new reactive streams interfaces.                                                                                                                                                                             | 2 |
| 33            | Spring Boot Developer                                      | At the end of this training, participants will be able to: a) Create REST services b) Understand Data Access c) Understand Security, Messaging, Health and Monitoring                                                                                                                                                                                                                                                                                                                                                                            | 3 |
| <b>Others</b> |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |
| 34            | Blockchain for Developers                                  | This course is intended for Business heads, Project owners, Delivery heads, IT decision heads of organization to help them understand blockchain and plan blockchain strategy for their organization. After this program, you will know what is blockchain, selecting the appropriate implementation, phasing your blockchain strategy, resourcing and technical planning required to get blockchain implementation right                                                                                                                        | 2 |
| 35            | ElasticSearch                                              | You will install and set up Elasticsearch and Kibana, and handle documents using the Distributed Document Store. You will see how to query, search, and index your data, and perform aggregation-based analytics with ease. You will see how to use Kibana to explore and visualize your data. Further on, you will learn to handle document relationships, work with geospatial data, and much more, with this easy-to-follow guide. Finally, you will see how you can set up and scale your Elasticsearch clusters in production environments. | 5 |
| 36            | Selenium WebDriver 3.x with Jenkins & Cucumber Integration | In this course, participants will learn how to do automation easily using Selenium WebDriver through more hands-on along with integrating Selenium with Jenkins and Cucumber. After the completion of this course, participants would be able to do automation very easily and also able to do integration with Jenkins and Cucumber as well.                                                                                                                                                                                                    | 5 |
| 37            | Test Driven Development for .NET Applications              | At the end of Test Driven Development for .NET Applications training course, participants will learn: a) Sustainable approach to Test-Driven Development b) The practice of Test-Driven Development, which utilizes Refactoring and Unit Testing in a particularly fine-grained way                                                                                                                                                                                                                                                              | 2 |
| 38            | TDD using Spring Framework                                 | With a host of tools and techniques to support, like xUnit and several mocking frameworks, TDD is now a matured approach to practice it on various platforms. This intense hands-on program focuses on applying TDD on Java platform with a specific focus around Spring Framework.                                                                                                                                                                                                                                                              | 2 |