

Programme Outline

Artificial Intelligence	
1. Introduction to AI and it's fundamentals	<ul style="list-style-type: none">• Introduction to AI and understanding different AI terminologies• Understanding the evolution of AI and the AI winter cycle• The AI applications transforming various industries• Current AI market trends and opportunities• Chatbot fundamentals• Building and hosting a chatbot
2. Fundamentals of Linux	<ul style="list-style-type: none">• Introduction to Linux Kernel and vital role of Linux in application development• Working with Linux shell commands and different Linux text editors for Shell scripting• Managing Linux files, users and permissions
3. Data analysis with Python	<ul style="list-style-type: none">• Data Science vs Data Analysis vs Data Analytics• Working with python for data science• Python packages for data analytics applications• NumPy• Matplotlib• Pandas• Data analysis use cases
4. Machine Learning Algorithms with Python	<ul style="list-style-type: none">• Introduction to Artificial Neural Networks (ANN), Deep Neural Networks (DNN) and Deep Learning (DL)• Understanding how DL helps solve classical Machine Learning limitations• Implementation of deep learning networks like CNN with TensorFlow• Deep learning use cases
5. AI with Deep Learning Frameworks	<ul style="list-style-type: none">• Perceptron model and Learning rule• Deep neural networks and its components• Understanding how DL helps solve classical Machine Learning limitations• Implementation of deep learning networks like CNN with TensorFlow• Deep learning use cases
6. Engagement Activities/bootca	<ul style="list-style-type: none">• Computer vision applications with OpenCV and OpenVINO toolkit

<p>mps:</p>	<ul style="list-style-type: none"> ○ Introduction to computer vision and its applications ○ Developing computer vision applications with OpenCV ○ Computer vision use cases ○ Deep learning model optimization and deployment for inference at the edge with OpenVINO toolkit <ul style="list-style-type: none"> ● Natural Language processing with Python <ul style="list-style-type: none"> ○ Introduction to NLP ○ NLP applications, market trends and opportunities ○ Classification of NLP ○ Working with python packages to develop NLP applications ○ NLP use cases ● Text based Chatbot development <ul style="list-style-type: none"> ○ Introduction to chatbots ○ Chatbot applications, market trends and opportunities ○ Understanding chatbot architecture ○ Development and deployment of text based chatbots
<p>Cloud Computing</p>	
<p>1. Cloud Computing Concepts: A quick dive</p>	<ul style="list-style-type: none"> ● Cloud computing evolution, challenges and opportunities ● Cloud computing fundamentals and classifications ● Characteristics of Cloud Computing ● Cloud Deployment Model ● Cloud Service Delivery Model ● Cloud Global Infrastructures
<p>2. Insights into Azure Cloud Environment</p>	<ul style="list-style-type: none"> ● Azure Core Services and its classifications ● Microsoft Azure Cognitive Services ● Building applications with azure cognitive services
<p>3. Building and Managing Cloud Application with Microsoft Azure</p>	<ul style="list-style-type: none"> ● Customer Managed IaaS ● Fully Managed PaaS ● Serverless Applications (Code-Only) ● Introduction to Containers <ul style="list-style-type: none"> ○ Container vs VM ○ Docker Containers ○ Container Images and Repositories ○ Container Orchestration using Kubernetes
<p>4. Artificial</p>	<ul style="list-style-type: none"> ● Challenges related to AI implementations

Intelligence- the Azure Way of doing it!	<ul style="list-style-type: none"> • Solutions from Microsoft Azure for AI implementation • Computation Made Easy • Analytics is more fun • Data Management is a game • Automation at its best
Web Design & Digital Marketing	
1. Understanding web application architecture	<ul style="list-style-type: none"> • Web application components and classification of web applications • HTML for web Layout • CSS for Page Design • JS for Client-side scripting
2. Handling the web data at backend	<ul style="list-style-type: none"> • Understanding Server-Side Scripting • Web application dev with PHP, Syntax, semantics, data types, variables, flow control and loop control • Handling Client-side data using PHP • Managing Sessions at Server and Cookies at Client <ul style="list-style-type: none"> ○ Creating sessions, session data, reading and writing cookies at client side
3. Connecting End-to-End	<ul style="list-style-type: none"> • Introduction to relational databases- MySQL <ul style="list-style-type: none"> ○ Introducing relational databases, need for database, persistent storage benefits, MySQL basics, commands • Handling databases <ul style="list-style-type: none"> ○ CRUD operations using SQL, DDL and DML • Managing data in databases using PHP <ul style="list-style-type: none"> ○ Connecting to MySQL DB using PHP, performing CRUD operations using PHP, persistent storage of front-end data to MySQL DB
4. Modern web development using ReactJS and JQuery	<ul style="list-style-type: none"> • ReactJS framework, develop using React components and single page applications • JQuery for web application development, using component properties and dynamic handling of pages
5. Getting started with Digital Marketing and its applications	<ul style="list-style-type: none"> • Quick dive into digital marketing fundamentals • Digital marketing trends, challenges and opportunities, web elements involved, scope in web development • Applying the DM concepts in web

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| | <ul style="list-style-type: none">• Search Engine Optimization (SEO) for websites/ webapps, connecting through social media, routing and landing to marketing strategic locations on web |
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