



Program Structure

Machine Learning Engineer

Program Name	Certificate Course in ML Engineer								
Proposed Program Duration	400 hours								
Overview of program	<ul style="list-style-type: none"> ● Industry Sector – Responsible for designing and implementing processes and layouts for complex, large-scale data sets used for modelling, data management, manipulation, and research purpose. ● Skills acquired includes – Generic: Technical communication, Technical: statistical tools and platforms like R, Python and/or Excel, Azure ML Studio, Mathematical Modelling, Professional: Organizing skills. 								
Program Objectives	<ul style="list-style-type: none"> ● Acquire advanced Data Analysis skills. ● Stay Industry relevant and grow in your career. ● Create ML solutions for various business problems. ● Build and deploy production grade ML applications. ● Apply ML methods, techniques and tools immediately. 								
Target group of learners	<ul style="list-style-type: none"> ● BSc (Stat, Math, Physics, Chemistry, Geology) or BE/B.Tech ● Max Education – M.Tech (Engg, CSE), MS (Stat, Math, Physics, Chemistry, Geology). Master's Degree in Science/ Technology/ Mathematics/ Statistics 								
Entrance Exam test format	<table border="1"> <tr> <td>Time : 1 hour</td> </tr> <tr> <td>No of Questions: 50</td> </tr> <tr> <td>Exam Type: Multiple Choice questions</td> </tr> <tr> <td>Aptitude: 15 marks</td> </tr> <tr> <td>Basics of Computers: 10 marks</td> </tr> <tr> <td>Fundamental of Programming: 10 marks</td> </tr> <tr> <td>Logical thinking: 15 marks</td> </tr> </table>	Time : 1 hour	No of Questions: 50	Exam Type: Multiple Choice questions	Aptitude: 15 marks	Basics of Computers: 10 marks	Fundamental of Programming: 10 marks	Logical thinking: 15 marks	
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Job Role	Machine Learning Engineer, Data Engineer, Data Analyst, Data Scientist.								
Brief Job Description	Individuals at this job are responsible for developing applications and platforms in AI & Big Data Analytics. S/he will be responsible for developing software code to deploy algorithmic models as per the needs of the business and evaluating the technical performance of the same.								



Learning Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> ● Elaborate the various occupations under the Future Skills sub sector and the impact of these on organizations and businesses. ● Discuss the growing importance of AI and Big Data Analytics and its impact on the society. ● Describe product engineering concepts such as translating requirements into products and ensuring their timely delivery. ● Evaluate the running time and memory consumption of the model and modify it to suit the speed and memory constraints of the system. ● Use development tools, frameworks, platforms, libraries and packages to develop software code. ● Develop software code that can support the deployment of algorithmic models based on the requirements and constraints of the system. ● Plan their schedules and timelines based on the nature of work. ● Demonstrate how to communicate and work effectively with colleagues. ● Apply measures to maintain standards of health and safety at the workplace. ● Use different approaches to effectively manage and share data and information. ● Design a structured plan for self-learning and development. ● Develop strong relationships at the workplace through effective communication and conflict management. 			
A. Curriculum and Pedagogy	Module	Module Name	TH	PR/S
	ML101	Statistics for Machine Learning	10	50
	ML102	Python Programming	10	50
	ML103	Machine learning	50	110
	ML104	Time Series Analysis	10	40
	ML105	IDSC	10	30
		Examination	10	20
	Total		100	300