



DATA SCIENCE FOR MANAGERS

Available from **Feb 2020**

Instructor: Dr. Nayyar Zaidi	Time/Place: TBA
	Duration: 1 Day
	Price: Ask for the quote
	Contact: info@datascience-works.com

Description:

This one day course is aimed at providing an overview of Data Science to managers and executives. Data Science projects are different from typical software engineering projects, and this course is designed at training managers for successfully running the data science projects.

The course is an introductory level course on data science for managers. It provides a brief but complete overview of the field of Data Science. It delve into important issues such as inception of a data science project, managing of a data science project in terms of liaising with other stakeholders and other businesses. It trains you well into asking the right questions at the right time, intricacies of model building, deployability and post-production issues. It also discusses various issues of interest to AI management such as data privacy, issues of regulations, etc.

The course is ideal (however, not limited) for someone who has some basic experience in machine learning and is interested to take on roles that requires managing some data science activity. We will discuss typical questions such as:

1. How to convert your data into assets?
2. How to evaluate if data science can bring value to your business or problem?
3. How to manage a team of data scientists from inception to the end of the project?
4. How to communicate with technical team in clean and precise fashion?
5. How to liaise between non-technical management and technical team? Etc.

Training Learning Outcome (TLO):

After the training, you are expected to:

- Understand the basics of Data Science.
- Be able to scope a Data Science project out of some business needs.
- Understand the intricacies and complications of typical Data Science projects.
- Have a good understanding of rules and regulations surrounding Data Science project.

Target Audience:

The training is perfect for:

- Managers already managing a Data Science project or intending to project one,
- Data Scientists transitioning into managerial roles,
- Team leads of Data Science projects,
- Data Scientists,
- Software Engineerings and Computer Scientists.

Duration:

The training is expected to be delivered in 1 day (9-5pm), but the duration can be adjusted based on audience experience and background.

Outline:

The training is divided into six sessions, an outline of which is given in Table 1, along with detailed outline in this section.

	Session 1	Session 2	Session 3	Session 4	Session 5	Session 6
Day 1	Introduction to Data Science	Data Science Use-cases	DS Project Inception	DS Project Management	Blind Spots	Miscellaneous Topics

Table 1: DSFMx – Training Outline.

Let us delve deep into the details (outline of topics covered) of each session in the following.

Session 1 – Introduction

- Four Elements of Data Science
 1. Model
 2. Data
 3. Scale
 4. Process
- Machine Learning
 - Machine Learning Models
 - Deep Learning
 - Deep Reinforcement Learning
- Data vs. Big Data
- Data Science Platforms
- Data Science Teams

Session 2 – Data Science Use-cases

- Typical Machine Learning Problems
 - Credit Scoring
 - Medical Diagnostics, etc.

- Typical Deep Learning Problems
 - Computer Vision
 - Text Mining
 - Natural Language Processing
 - Game Playing
 - Large Scale Machine Learning
 - Data Science Platforms
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Session 3 – Data Science Project: The Inception

- Identifying the problem
 - Are you solving a new problem?
 - Identify the value of your product or service
 - Scoping the project
 - Identifying the stakeholders
 - Building the team
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Session 4 – Data Science Project: The Management

- Identifying the success of the project
 - Various metrics translating into business outcomes
 - Managing Model training
 - Managing Production
 - Error Analysis
 - Continuous life-cycle of a product
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Session 5 – Data Science Project: The Intricacies

- Good, bad and ugly aspects of Big Data
 - Bad Data
 - Covariate-shift
 - Difference between training and production data
 - Model Stalling
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Session 6 – Data Science Project: Miscellaneous Issues

- Explainable AI
 - Data Privacy
 - examples and use cases
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About the Instructor:

Dr. Nayyar Zaidi is the lead Data Scientist at DataScienceWorks and a Senior Lecturer of Computer Science at Deakin University. He received the B.S. degree in computer science and engineering from the University of Engineering and Technology, Lahore, in 2005, and the Ph.D. degree in Artificial Intelligence from Monash University, Melbourne, Australia, in 2011. He worked as a Research Fellow, a Lecturer, and a Research Fellow,

from 2011 to 2013, from 2013 to 2014, and from 2014 to 2017, respectively, at the Faculty of Information Technology, Monash University. From 2017 to 2019, he worked as Research Scientist at Credit AI (Trusting Social) Melbourne Lab. His research interests include feature engineering, data generation explainable models and ethical AI. He is also interested in practical (applied) data science, machine learning engineering, and data science training.

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