



Business Intelligence, Data Visualization & Dashboarding and Data Mining

A Management Development Program by NPTI, Government of India

Date: 29th April, 2024 to 3rd May, 2024

Venue: NPTI Campus, Faridabad

Duration: 5 days (6 hours each day) Four sessions of 90 minutes each day

Pedagogy: Tutorials, Hands on lab session, Capstone Project

Tools: Microsoft Excel, PowerBI and Tableau

APPLY NOW

About NPTI



National Power Training Institute (NPTI), is organization under Ministry of Power, Govt. of India is a National Apex body for Training and Human Resources Development in Power Sector and the world's leading integrated Power Training Institute, with its Corporate Office at Faridabad. NPTI operates on a Pan- India basis through its Eleven institutes in different power zones of the country located at Faridabad, Badarpur, Nangal, Bengaluru, Neyveli, Allapuzha, Durgapur, Guwahati, Nagpur & Shivpuri. Apart from highly skilled and competent trainers and state of art laboratories, NPTI has Hi-tech real time simulators at its various Institutes. NPTI trained more than 4,50,000 Power Professionals in various training programs over the last 5 decades. NPTI is the only institute of its kind in the world with such a wide geographical spread and covering a wide gamut of academic and training programs in Power Sector.

Program Features

The program is a 5 day classroom program delivered at our 15 acre NPTI Headquarters at Faridabad in the NCR region. Participants can avail campus residency on an optional basis.

The program is application oriented and participants will experience rapid skill development in generating insights from data and visualization based storytelling. Course materials include Practice Playbooks, Tutorial handouts, shared drive knowledge repository and Exercise files.

This is a hands-on course with participants working hands on to develop Data Dashboards and scorecards. The course is aimed at making participants proficient in both PowerBI and Tableau – the worlds best platforms for Business Intelligence platform and data visualization.

The program is comprehensive in coverage as it covers skill development for data-based Insights generation, dashboard development to publishing and deployment.

Gartner, the world leader in IT research, names Microsoft PowerBI and Tableau as the world's best and leading platform for Data Dashboard and Visualization and deployment. Both these platforms will be covered in the Training Program.

If taught well in a structured way, Data Analysis and Data storytelling skills can be significantly enhanced over a matter of days. The course aims for rapid skill development. Participants will feel the pleasure and pride of developing tangible skills and experience of enhanced productivity at their current workplace immediately.

Business Intelligence and Data Dashboarding skills have an immediate impact on your productivity, enhancing the scope of work in terms of quality and quantity of business analysis.

The course is suitable for beginners as well as experienced executives.

MDP Objectives

The 5 day program is expected to help professionals who are currently working as data analyst, business analyst and professionals working in commerce, operations, finance, marketing department to learn the tools and skills related to science and art of Business Intelligence, Data Visualization and Data Mining. The program can also help managers acquire skills to develop insights from data quickly and enable data driven decision making. PowerBI and Tableau professionals are high demand in marketplace so the program is also useful for freshers and recently recruited professionals.

Participants at the end of the course will develop hands on skills in the following areas:

- Data Wrangling and Data Reshaping skills including the ETL skills (Extraction, Transformation and Loading Skills) – including data modeling skills
- Generate Insights and intelligence from the data quickly
- Understand the different types of charts and visuals
- Visually represent data through interactive dashboards and scorecards
- Dashboard implementation in PowerBI, Tableau and Excel
- Publishing and deploying dashboard over cloud

Delivered by Industry Practitioners with decades of experience in the field with well curated modules, hands on tutorials, this intense yet friendly program will help participants become productive in a matter of days. Data dashboarding and Insights skills can impress everyone as decision making is increasingly becoming data and insights driven.

Content and Topics

Session No.	Topic	Comments
Day 1		
Session 1	Introductions Program Overview – Core BI Capabilities Context overview – Learning Roadmap-Database terminology Resources available for the course: Exercise Files	Introductory Session Understanding skills landscape Setting expectations How to benefit from the course Set up of personal Computers
Session 2	Introduction to PowerBI – Interfaces, Menus Sample Dashboard Development Design, Visuals, Slicers and drill downs	Getting familiar with PowerBI Practice session for dashboard development
Session 3	Developing dynamic Dashboard Understanding Different types of Charts in Excel and PowerBI	Understanding Charts and visuals in Excel and PowerBI – Bar, Pie, Table and Matrix visuals, Combo charts, Heat map, Radar, Waterfall charts, Box plots, Violin charts, Map Charts, Sparkline,
Session 4	Visual Hackathon - a guided lab session	Hands on Practice Session – Introduction to Tableau or PowerBI

DAY 2		
Session 1	Advance Visualizations Geographic Visualizations Mobile Intelligence Word Cloud Integrating Text and sentiment Analytics Top N filtering Custom Visuals Animating through Time	Advance Charts and Visuals including Generative AI capabilities like QnA and custom visuals
Session 2	Advance Visuals- Integrating 3 rd Party API information Visuals	Understanding 3 rd party API and dynamic visuals
Session 3	Reshaping Data – Power Query- Table Transformations Connecting to Databases Grouping and aggregating Merging and appending	Fetching Data and transforming data
Session 4	Capstone BI dashboard Project for Participant	Participants will do hands- on Project from scratch to apply skills learnt in previous sessions
Day 3		
Session 1	Understanding Data Modelling: Data Model and RDBMS systems Relationships – Joins – (Basics of SQL) Filter context & flow Hierarchies Data Cubes	The basics of RDBMS systems
Session 2	PowerQuery and PowerPivot: 1 Data Transformation and ETL Principles	Data Transformation
Session 3	PowerQuery and PowerPivot :2 Calculated columns & measures Implicit, explicit & quick measures Measure calculation steps DAX syntax & operators	Basics of ETL Connecting to databases
Session 4	Tutorial Lab session: Movies Database	
Day 4		
Session 1	Publishing and deploying PowerBI Reports Power BI Service Power BI Data Driven Alerts Report Sharing	
Session 2	Tableau: Dashboard Project Visual Tableau Insights through animations	Developing Tableau Dashboard from scratch
Session 3	Tableau Analytics: Reference Line Clusters Groups and Binning Prediction	Tableau Tutorial
Session 4	Practice Example/Lab Session	
DAY 5		
Session 1	Data Mining Topic 1: Creating Clusters – K means and Hierarchical Clustering – Distance Measures	An Introduction to Data Mining
Session 2	Topic 2: Text Analysis – Word Cloud – Integration with R and Python Visuals in PowerBI	
Session 3	Capstone Project Exercise	
Session 4	Course Wrap up	

**NPTI reserves the right to modify content as the technology platforms undergo change from time to time.*

Please Note

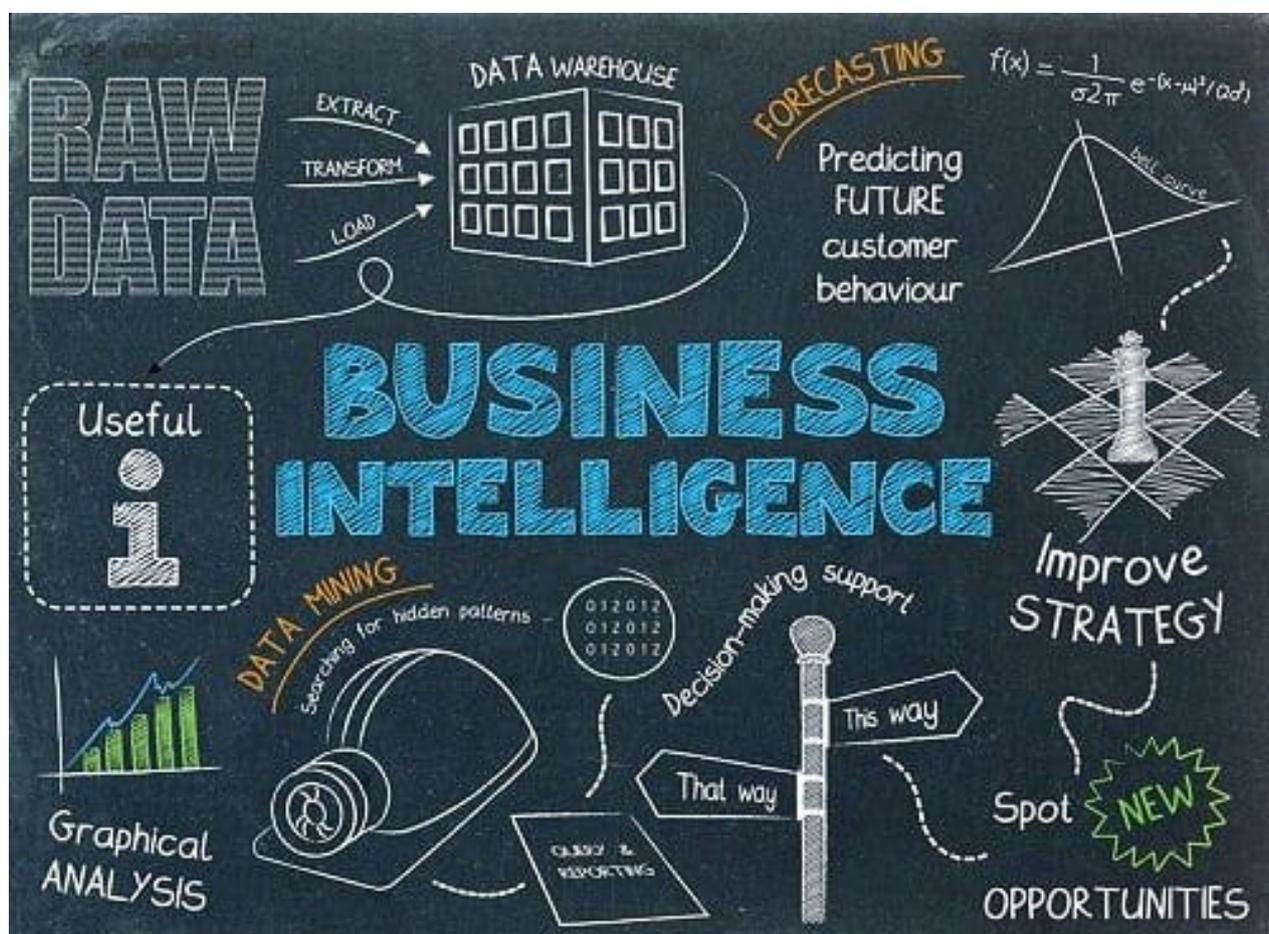
- All enrolments are subject to review and approval by the NPTI. Joining Instructions will be sent to the selected candidates 10 days prior the start of the program
- The program fee should be received by the NPTI Executive Education Office before the programme commencement date.
- In case of cancellations, the fee will be refunded only if a request is received at least 10 days prior to the start of the programme.
- A certificate of participation will be awarded to the participants by NPTI.

Pre-requisites

Basic computer familiarity is expected in Microsoft excel and Microsoft office. Participants are expected to bring windows laptops. People not at all familiar with Excel should not apply.

Application Link

The link for applying to the course: <https://forms.gle/HPGZtao3HUprh7o9>



Faculty Members



Dr. Mudit Kulshreshtha

NPTI

Dr. Mudit Kulshreshtha has significant academic and industry experience of more than 24 years. He is currently consulting data scientist at NPTI. He has been Professor and Co-director of Center of Excellence for Analytics at Great Lakes Institute of Management, resident faculty at IIM Kashipur and visiting faculty at IIM Lucknow. Earlier he led the Analytics Practices at Deloitte Consulting, Angel One and WNS. He also has significant industry experience as vice president and Head of Analytics and Customer Insights team at PAYBACK, an American Express Company, running analytics for India's largest coalition loyalty program with clients such as Future Group (Big Bazaar), ICICI Bank, eBay and Make MY Trip and Central. The Analytics team headed by Mudit was awarded the 'Best Big Data Analytics Team of the Year' at the Customer Loyalty Summit and Best Use of Customer and Data Analytics in a Loyalty Program in 2017.

He had a significant stint at Deloitte Consulting as Director and Head of Analytics for Region 10 where he also established and ran the M & A Center of Excellence for Deloitte Consulting global clients. He was also Executive Director of the Business Intelligence and Advanced Analytics department at Angel One. Prior to this he was AVP in the Transactions Advisory practice at Ernst and Young. Dr. Mudit has received education at IGIDR, (an advanced research institute of RBI), IIT Delhi and NIT Allahabad, India.



Dr. Gautam Das

NPTI

Dr. Gautam Das completed his Bachelors in Electronics Engineering from NIT Nagpur, MTech in Computer Engineering from IIT Kharagpur and Ph.D. in International Economics, Indian Institute of Foreign Trade (IIFT), Delhi on Foreign Direct Investment. He has also done 'Six Sigma Master Black Belt' an advanced Statistical Analysis course at Indian Statistical Institute.

As a Data Science and Business Analytics thought leader, he has 30+ years of corporate experience in IT, Automation & Data Analytics [Statistical Analysis, Econometrics Modelling], AI & Machine Learning, Big Data Analytics, etc.

He was the Global Head / Chief Data Scientist for Business Analytics Consulting wing at TCS and Senior Data Scientist at IBM. Thereafter he served as Chief Data Scientist at Power Foundation of India – the think-tank of Ministry of Power, Govt. of India. Currently he is CEO and Chief Data Scientist at insAnalytics and Consulting Data Scientist at NPTI.

He has designed industry tuned curriculum and taught Data Science, AI Machine Learning, Business Analytics, Sustainability and Shared Economics at various premier institutes like IIT-Kharagpur, IIM-Calcutta, IIM-Lucknow etc.

Program Coordinators

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