Tourism Data Analytics and Business Intelligence Training Course



23 - 27 Nov 2026

Barcelona

5900 € (Per Person)

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Course Introduction / Overview:

This course provides a comprehensive exploration of Big Data Analytics and Business Intelligence tailored specifically for the dynamic tourism and hospitality industry. In an era where data is the new currency, the ability to collect, analyze, and interpret vast amounts of information is critical for gaining a competitive edge, enhancing guest experiences, and optimizing operational efficiency. This program moves beyond theoretical concepts to offer practical, actionable strategies for leveraging data in real-world tourism scenarios. We will delve into the principles outlined by leading academics like Dimitrios Buhalis, a renowned expert in smart tourism and e-tourism, whose work emphasizes the transformative power of technology in the sector. Participants will learn to navigate the complexities of tourism data, from booking patterns and social media sentiment to IoT sensor data from smart destinations. BIG BEN Training Center has designed this curriculum to empower professionals to make informed, data-driven decisions that drive revenue and foster sustainable growth, referencing concepts from works like "Big Data and Business Analytics in the Hospitality Industry". This course is your definitive guide to mastering the analytical skills needed to thrive in the future of travel.

Target Audience / This training course is suitable for:

- Tourism and Hospitality Managers.
- Hotel General Managers and Revenue Managers.
- Airline and Cruise Line Analysts.
- Destination Marketing Organization (DMO) staff.
- Travel Agency and Tour Operator Executives.
- Marketing and Sales Professionals in the tourism sector.
- Business Intelligence and Data Analysts new to the tourism industry.
- Operations Managers in hospitality and travel companies.
- Entrepreneurs and consultants in the tourism field.

Target Sectors and Industries:

- Hospitality and Accommodation Sector (Hotels, Resorts, Vacation Rentals).
- Aviation and Transportation Industry (Airlines, Cruise Lines, Railways).
- Travel Agencies and Tour Operators.
- Food and Beverage Services.
- Events and MICE (Meetings, Incentives, Conferences, and Exhibitions) Industry.
- Tourism Technology Companies.
- Governmental and Non-Governmental Tourism Boards and Authorities.
- Cultural Heritage and Attraction Management.

Target Organizations Departments:

- Marketing and Sales Departments.
- Revenue Management and Pricing Departments.
- Operations and Guest Services Departments.
- Strategic Planning and Business Development Departments.
- Information Technology (IT) and Data Analytics Teams.
- Finance and Accounting Departments.
- Customer Relationship Management (CRM) Departments.
- Human Resources for workforce analytics.

Course Offerings:

By the end of this course, the participants will have able to:

- Identify and source relevant data streams within the tourism ecosystem.
- Apply fundamental principles of big data and business intelligence to tourism challenges.
- Analyze customer behavior and segment markets using advanced analytical techniques.
- Develop data visualization dashboards to track key tourism performance indicators (KPIs).
- Implement strategies for data-driven revenue management and price optimization.
- Utilize predictive analytics for demand forecasting and resource planning.
- Evaluate social media sentiment and online reviews to improve service quality.
- Formulate a comprehensive data-driven business strategy for a tourism enterprise.
- Understand the ethical considerations and data privacy issues in tourism analytics.
- Leverage BI insights to enhance the personalized guest experience.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, practical, and engaging, ensuring that participants can immediately apply their learning in a professional context. We move beyond traditional lectures by integrating a blended learning approach that includes expert-led presentations, real-world case study analyses from the tourism industry, and hands-on workshops. Participants will work in collaborative groups on projects that simulate real business challenges, such as developing a BI dashboard for a hotel chain or creating a predictive model for flight bookings. These interactive sessions foster critical thinking, problem-solving, and teamwork. The course emphasizes learning by doing, with practical exercises using anonymized datasets. Our expert instructors facilitate dynamic discussions and provide personalized feedback to guide each participant's development. This immersive and supportive learning environment ensures a deep understanding of complex concepts and equips attendees with the confidence and skills to implement data-driven strategies within their organizations.

Course Agenda (Course Units):

Unit One: Foundations of Data in the Tourism Industry

- Introduction to Big Data, Business Intelligence, and Analytics.
- The strategic importance of data in tourism and hospitality.
- Key data sources in the tourism ecosystem (e.g., GDS, PMS, OTAs, Social Media).
- Understanding the data lifecycle: from collection to decision-making.
- Differentiating between structured, semi-structured, and unstructured data.
- Challenges and opportunities of big data in tourism.
- Case studies of data-driven success in the travel sector.

Unit Two: Data Management and Preparation for Tourism Analytics

- Techniques for data collection and aggregation.
- Fundamentals of data warehousing and data lakes for tourism data.
- Processes for data cleaning, transformation, and quality assurance.
- Introduction to data governance and privacy regulations (e.g., GDPR).
- Tools and platforms for managing large datasets (conceptual overview).
- Preparing data for analysis: feature engineering and selection.
- Practical exercises in data wrangling with tourism-related datasets.

Unit Three: Core Analytical Techniques for Tourism Insights

- Descriptive Analytics: Understanding past performance with KPIs and metrics.
- Diagnostic Analytics: Root cause analysis for tourism trends.
- Predictive Analytics: Forecasting demand, bookings, and customer behavior.
- Prescriptive Analytics: Recommending optimal actions for pricing and marketing.
- Customer segmentation and persona development using clustering techniques.
- Sentiment analysis of online reviews and social media feedback.
- Market basket analysis for cross-selling and up-selling opportunities.

Unit Four: Business Intelligence and Data Visualization

- Principles of effective data visualization and storytelling.
- Introduction to Business Intelligence platforms and their functions.
- Designing and building interactive dashboards for tourism management.
- Key Performance Indicators (KPIs) for hotels, airlines, and destinations.
- Visualizing geographic data with maps for destination analysis.
- Communicating analytical insights to non-technical stakeholders.
- Workshop: Creating a BI dashboard for a tourism scenario.

Unit Five: Strategic Application and Future Trends

- Developing a data-driven organizational culture.
- Integrating analytics into strategic decision-making processes.
- Case Study: Implementing a BI strategy in a hotel or airline.
- The role of AI and Machine Learning in the future of tourism analytics.
- Introduction to Smart Tourism and the Internet of Things (IoT).
- Ethical considerations in using personal data for marketing and personalization.
- Final Project: Creating a data-driven strategic plan for a tourism business.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

As predictive analytics becomes more precise in forecasting travel behavior, what are the ethical boundaries for tourism marketers in using this data to influence consumer choice?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by focusing squarely on the practical application of data analytics and business intelligence within the unique context of the tourism and hospitality industry. Unlike generic data science courses, every module, case study, and exercise is tailored to address the specific challenges and opportunities faced by hotels, airlines, destination marketers, and tour operators. We emphasize strategic thinking over mere tool proficiency, teaching participants how to ask the right business questions before seeking data-driven answers. The curriculum is designed to build a holistic understanding, connecting data collection and technical analysis directly to strategic outcomes like enhanced guest personalization, optimized revenue, and improved operational efficiency. Furthermore, the course is forward-looking, incorporating discussions on emerging trends such as smart tourism, AI-driven recommendations, and the ethical responsibilities of data stewardship in the travel sector. This strategic, industry-specific focus ensures that participants leave not just with new skills, but with a comprehensive framework for transforming their organizations through the intelligent use of data.