AI for Retail and E-Commerce Optimization Training Course



30 Nov - 04 Dec 2026

California

7900 € (Per Person)

Ref: #AI1430_173762

Course Introduction / Overview:

The retail and e-commerce landscape is undergoing a profound transformation, driven by the power of Artificial Intelligence. This course provides a comprehensive exploration of how AI is reshaping every facet of the industry, from personalizing the customer journey to optimizing complex supply chains. We will delve into the practical applications of machine learning, natural language processing, and computer vision that are enabling businesses to gain a significant competitive edge. Drawing on principles discussed by leading academics like Dr. Peter Fader in works such as "Customer Centricity: Focus on the Right Customers for Strategic Advantage," this program moves beyond theory to focus on actionable strategies. Participants will learn to leverage AI for data-driven decision-making, enhancing operational efficiency and creating unparalleled customer experiences. BIG BEN Training Center has designed this course to equip professionals with the skills to not only understand AI concepts but also to strategically implement AI solutions that drive growth, profitability, and innovation in the dynamic world of modern commerce. This is an essential program for anyone looking to master the technologies defining the future of retail and e-commerce.

Target Audience / This training course is suitable for:

- Retail Managers and Store Owners.
- E-commerce Directors and Specialists.
- Marketing and Digital Marketing Professionals.
- Supply Chain and Logistics Managers.
- Data Analysts and Business Intelligence Specialists.
- IT Professionals working in the retail sector.
- Product Managers and Merchandisers.
- Business Strategists and Consultants.

Target Sectors and Industries:

- Online Retail and E-commerce Platforms.
- Brick-and-Mortar Retail Chains.
- Fashion, Apparel, and Luxury Goods.
- Consumer Packaged Goods (CPG).
- Electronics and Home Appliances.
- Grocery and Supermarket Chains.
- Pharmaceuticals and Health Retail.
- Government procurement and supply agencies.

Target Organizations Departments:

- Marketing and Sales.
- Operations and Logistics.
- Supply Chain Management.
- Customer Service and Support.
- Information Technology (IT).
- Business Intelligence and Data Analytics.
- Product Development and Merchandising.
- Strategic Planning and Business Development.

Course Offerings:

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

- Develop a comprehensive AI strategy tailored for a retail or e-commerce business.
- Analyze customer data to create highly personalized shopping experiences and product recommendations.
- Implement AI-powered tools for dynamic pricing and inventory management.
- Optimize supply chain and logistics operations through predictive analytics and demand forecasting.
- Enhance customer engagement using AI-driven chatbots and virtual assistants.
- Utilize machine learning models for customer segmentation and lifetime value prediction.
- Evaluate and select appropriate AI technologies and vendors for specific business needs.
- Address the ethical considerations and data privacy challenges associated with AI in retail.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, practical, and results-oriented. This course moves beyond traditional lectures to create an immersive learning environment where participants actively engage with the material. We utilize a blend of expert-led presentations, in-depth case studies of leading retail and e-commerce companies, and collaborative group workshops. Participants will work in teams to analyze real-world business problems and design AI-driven solutions, fostering practical problem-solving skills. The curriculum includes hands-on exercises that allow for the application of concepts like demand forecasting and customer segmentation in a controlled setting. Open discussions and Q&A sessions are integral to each module, encouraging the sharing of ideas and experiences among peers. Our approach ensures that participants not only grasp the theoretical foundations of AI in retail but also gain the confidence and competence to apply these powerful tools directly to their own professional contexts, driving tangible business outcomes upon their return to the workplace.

Course Agenda (Course Units):

Unit One: Foundations of AI in the Retail Ecosystem

- Introduction to Artificial Intelligence, Machine Learning, and Deep Learning.
- The evolution of retail and the impact of digital transformation.
- Key AI applications across the retail value chain.
- Understanding the data requirements for successful AI implementation.
- Case studies of AI pioneers in e-commerce and retail.
- Differentiating between AI hype and practical business value.
- Core concepts of retail analytics and business intelligence.
- Ethical considerations and data privacy in AI for retail.

Unit Two: AI-Powered Customer Experience and Personalization

- Building sophisticated product recommendation engines.
- Leveraging AI for hyper-personalization of marketing and content.
- Developing and deploying intelligent chatbots and virtual assistants.
- The role of Natural Language Processing (NLP) in understanding customer feedback.
- Implementing visual search and image recognition technologies.
- Analyzing customer journey maps with AI to identify friction points.
- Predicting customer churn and developing retention strategies.
- Creating seamless omnichannel experiences with AI.

Unit three: Optimizing Retail Operations with AI

- AI-driven demand forecasting and inventory management.
- Implementing dynamic pricing strategies using machine learning.
- Optimizing supply chain logistics and route planning.
- AI for warehouse automation and robotics.
- In-store analytics using computer vision for foot traffic and layout optimization.
- AI-based fraud detection for e-commerce transactions.
- Automating back-office processes for increased efficiency.
- Predictive maintenance for retail equipment and infrastructure.

Unit Four: AI in Retail Marketing and Sales Analytics

- Advanced customer segmentation using clustering algorithms.
- Predicting Customer Lifetime Value (CLV) for strategic focus.
- Optimizing digital advertising spend with AI.
- Sentiment analysis of social media and customer reviews.
- Market basket analysis to uncover purchasing patterns.
- Attribution modeling to understand marketing channel effectiveness.
- Generating AI-powered marketing copy and product descriptions.
- Sales forecasting and performance analysis.

Unit Five: Strategic Implementation and the Future of AI in Retail

- Developing a roadmap for AI adoption in your organization.
- Building a business case and calculating the ROI of AI projects.
- Managing data governance and quality for AI systems.
- Leading organizational change for an AI-first culture.
- Evaluating and partnering with AI technology vendors.
- The future of retail: AI, the metaverse, and immersive commerce.
- Scaling AI solutions from pilot projects to enterprise-wide deployment.
- Final project: Designing a comprehensive AI strategy for a sample retail 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 AI-driven personalization becomes the norm, where is the ethical line between creating a tailored customer experience and manipulating consumer behavior?

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

This course distinguishes itself by adopting a holistic, strategy-first approach to AI in retail and e-commerce, rather than focusing narrowly on technical tools or programming. We emphasize the critical link between AI capabilities and core business objectives, ensuring participants learn not just what AI can do, but how to leverage it to drive measurable growth, efficiency, and customer loyalty. Unlike purely technical courses, our curriculum is designed for business leaders, managers, and professionals, translating complex concepts into practical, actionable strategies. The program uniquely balances the dual imperatives of modern commerce: enhancing the customer experience through hyper-personalization while simultaneously optimizing back-end operations and supply chains for maximum efficiency. We place a strong emphasis on real-world case studies, ethical considerations, and the development of a strategic roadmap for implementation. This ensures that participants leave not with abstract knowledge, but with a comprehensive framework for leading AI-driven transformation within their own organizations, making it a strategic investment in professional and business development.