

# TABLE OF CONTENTS

<b>Chapter 1: Evolution of Enterprise Intelligence</b>	<b>01-18</b>
1.1 Traditional Business Intelligence and Dashboarding	
1.2 Limitations of Static Reporting Systems	
1.3 Transition from Data Visualization to Decision Intelligence	
1.4 Role of Data-Driven Culture in Enterprises	
1.5 Overview of AI-Driven Enterprise Intelligence	
<b>Chapter 2: Foundations of Generative AI in Business</b>	<b>19-43</b>
2.1 Introduction to Generative AI Concepts and Models	
2.2 Large Language Models (LLMs) and Their Applications	
2.3 Generative AI vs Traditional Machine Learning	
2.4 Use Cases in Enterprise Decision-Making	
2.5 Ethical Considerations and Responsible AI	
<b>Chapter 3: Real-Time Analytics and Streaming Data Systems</b>	<b>44-64</b>
3.1 Fundamentals of Real-Time Data Processing	
3.2 Batch Processing vs Stream Processing	
3.3 Technologies for Real-Time Analytics (Kafka, Spark, Flink)	
3.4 Event-Driven Architectures in Enterprises	
3.5 Real-Time Decision-Making Use Cases	
<b>Chapter 4: MLOps and AI Lifecycle Management</b>	<b>65-85</b>
4.1 Introduction to MLOps Principles and Practices	
4.2 Model Development, Training, and Validation	
4.3 Continuous Integration and Continuous Deployment (CI/CD) for ML	
4.4 Model Monitoring, Drift Detection, and Maintenance	
4.5 Governance and Compliance in AI Systems	
<b>Chapter 5: Integrating Generative AI with Analytics Systems</b>	<b>86-103</b>
5.1 Combining Generative AI with BI Tools	
5.2 Augmented Analytics and Automated Insights	
5.3 Natural Language Interfaces for Data Exploration	
5.4 AI-Powered Decision Support Systems	
5.5 Case Studies in Enterprise AI Integration	

<b>Chapter 6: Data Infrastructure and Architecture for Intelligence</b>	<b>106-120</b>
6.1 Modern Data Architectures (Data Lakes, Warehouses, Lakehouses)	
6.2 Data Pipelines and ETL/ELT Processes	
6.3 Cloud Platforms and Scalable Infrastructure	
6.4 Data Governance, Security, and Privacy	
6.5 Interoperability and Integration Challenges	
<b>Chapter 7: Applications Across American Industries</b>	<b>121-135</b>
7.1 AI in Financial Services and Banking	
7.2 Healthcare Analytics and Predictive Intelligence	
7.3 Retail, E-commerce, and Customer Personalization	
7.4 Manufacturing and Supply Chain Optimization	
7.5 Public Sector and Smart Governance	
<b>Chapter 8: Future Trends and Strategic Implementation</b>	<b>136-155</b>
8.1 Autonomous Decision Systems and AI Agents	
8.2 Human-AI Collaboration in Enterprises	
8.3 Emerging Trends in Enterprise Intelligence	
8.4 Challenges in Adoption and Change Management	
8.5 Strategic Roadmap for AI-Driven Enterprises	