
Digital Marketing with AI and Power BI: A Modern Approach to Business Growth

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ABSTRACT

This study focuses on the integration of Digital Marketing with Artificial Intelligence (AI) and Power BI with AI as a modern approach to business growth. In today's data-driven digital environment, organizations increasingly rely on advanced technologies to enhance marketing performance, understand customer behaviour, and make informed decisions. The study highlights how AI-powered tools improve digital marketing activities such as search engine optimization, social media marketing, email marketing, and paid advertising through automation, personalization, and predictive analysis. The study also demonstrates the application of data analytics using Power BI through a case-based approach to support business decision-making.

INTRODUCTION

Digital Marketing with AI

The Digital Marketing with AI course offered by Internshala provides comprehensive knowledge of modern marketing techniques integrated with artificial intelligence tools. In today's digital era, businesses rely heavily on online platforms to reach and engage their target audience effectively. This course focuses on essential digital marketing concepts such as search engine optimization (SEO), social media marketing, email marketing, and paid advertising, along with the application of AI technologies to enhance marketing performance.

Artificial Intelligence plays a significant role in automating tasks, analysing consumer behaviour, and improving decision-making processes. Through this course, The training has equipped me with both theoretical understanding and hands-on skills required to execute effective digital marketing strategies in real-world scenarios.

Power BI with AI

The **Power BI with AI** certification program offered by Internshala is designed to provide comprehensive knowledge of data analytics, visualization, and business intelligence integrated with artificial intelligence. In today's data-driven world, organizations rely heavily on data analysis to make informed decisions, improve performance, and gain a competitive advantage. This course helps learners understand how to transform raw data into meaningful insights using advanced tools and technologies.

The program focuses on the use of Microsoft Power BI, a powerful business intelligence tool developed by Microsoft. Power BI enables users to connect to various data sources, clean and transform data, and create interactive dashboards and reports. It simplifies complex data into visually appealing charts, graphs, and tables, making it easier for businesses to understand trends and patterns.

Industry Profile

This integration plays a crucial role in improving marketing ROI and customer engagement.

Digital Marketing with Artificial Intelligence (AI) and Power BI refers to the use of advanced technologies, data analytics, and intelligent tools to analyse marketing performance, understand customer behaviour, and optimize business strategies. It involves the continuous step-by-step evaluation of digital campaigns, customer interactions, and online trends to gain insights and improve decision-making.

Digital marketing combined with AI and Power BI integrates the fields of marketing, data analytics, and computer science. The marketing aspect focuses on understanding customer needs, branding, and promotional strategies, while the analytical part involves handling large volumes of data, using AI algorithms for prediction, and visualizing insights through tools like Power BI dashboards. This integration helps businesses make data-driven decisions and improve marketing effectiveness.

Company Profile

Internshala is an Indian online platform that helps students and fresh graduates find internships, jobs, and skill-based training opportunities. Founded in 2010 by Sarvesh Agrawal and headquartered in Gurugram, it operates in the field of education technology (EdTech) and employment services. The platform aims to bridge the gap between academic learning and practical industry experience by providing a wide range of internships in various fields, including both work-from-home and in-office roles. In addition to internships, Internshala offers online training programs in areas such as digital marketing, data science, web development, and finance, along with job opportunities for freshers. Its mission is to equip students with relevant skills and real-world exposure to help them start successful careers, while its vision focuses on enabling students to discover their interests and gain practical knowledge before graduating.

Vision and Mission

Vision

To create a data-driven and technology-enabled business environment by integrating digital marketing strategies with business intelligence and Artificial Intelligence, enabling organizations to make smarter decisions, deliver personalized customer experiences, and achieve sustainable growth in the digital era.

Mission

The mission of integrating Digital Marketing with AI and Power BI with AI is to effectively combine modern marketing strategies with advanced data analytics and artificial intelligence to achieve better business outcomes.

List of Company Products and Services

Products

The company offers various digital and analytical products that help businesses improve marketing performance and data analysis:

- **Digital Marketing Campaigns** – Customized online marketing campaigns for brand promotion
- **AI-Based Marketing Tools** – Tools for automation, customer targeting, and content generation
- **Marketing Content** – Blogs, social media posts, videos, and advertisements
- **Business Intelligence Dashboards** – Interactive dashboards created using Microsoft Power BI
- **Data Reports** – Analytical reports showing business performance and insights
- **Customer Insights Reports** – AI-generated reports on customer behavior and preferences

Services

These services are supported by AI-driven insights and real-time analytics using Power BI dashboards. The company provides a wide range of services in both digital marketing and data analytics:

Digital Marketing Services

- Search Engine Optimization (SEO)
- Social Media Marketing (SMM)
- Search Engine Marketing (SEM)

Need and Scope for the Study

Need of the Study

In today's digital world, businesses generate large amounts of data and depend on online platforms to reach their customers. The integration of Digital Marketing with AI and Power BI with AI has become essential to manage this data effectively and to make better business decisions.

Scope of the Study

The scope of this study includes understanding the application of Artificial Intelligence in both digital marketing and data analytics. It covers various digital marketing activities such as SEO, social media marketing, content marketing, and email marketing, along with AI tools used for automation and personalization.

Objectives of the Study

- To study the role of Digital Marketing integrated with Artificial Intelligence (AI).
- To examine the use of Microsoft Power BI in data visualization and decision-making.
- To study how AI and data analytics improve marketing performance and business growth.

RESEARCH METHODOLOGY

Research Design

This study adopts a descriptive and analytical research design to examine the role of AI and Power BI in digital marketing and business growth.

Variables of the Study

Independent Variables:

- AI tools usage
- Marketing automation
- Personalization

Dependent Variables:

- Customer engagement
- Conversion rate
- Business growth.

Data Source

The study uses secondary data and a Kaggle dataset for analytical demonstration.

Hypothesis

- H1: AI improves digital marketing performance
- H2: Personalization increases customer engagement
- H3: Power BI improves decision-making

Digital Marketing with AI

Period of Study

For the period of 8 weeks

Methods of Digital Marketing Analyst

Digital Marketing Analyst

A critical component of digital marketing involves understanding customer behaviour, market trends, and campaign performance. Some research methods include:

- User Behaviour Analysis: Studying how users interact with websites, ads, and social media platforms
- Social Media Monitoring: Tracking engagement, likes, shares, and comments
- SEO Analysis: Analysing keyword performance and website ranking

Power BI with AI

Period of Study

For the period of 6 weeks

Methods of Data Analyst

Data Analyst

A critical component of data analytics involves understanding data, patterns, and business insights. Some research methods include:

- Data Exploration: Examining datasets to understand structure and patterns
- Data Cleaning: Removing errors, duplicates, and missing values
- Data Transformation: Converting raw data into useful formats
- Data Visualization: Presenting data using charts, graphs, and dashboards

Data Analysis and Interpretation

Application of AI and Power BI in Fraud Detection (Business Analytics)

This section presents a case study demonstrating the application of Artificial Intelligence and Power BI in business analytics. Although the primary focus of this study is digital marketing, this case illustrates how

analytical tools can be applied in real-world business scenarios such as fraud detection. The financial card industry has undergone a rapid transformation in the digital era. With the exponential rise of e-commerce, UPI-linked credit lines, mobile wallets, and contactless payments, transaction volumes have increased dramatically.

However, this growth has also increased fraud risks such as:

- Identity theft
- Card-not-present fraud
- Refund fraud
- AI-driven cyber attacks

Understanding **why fraud occurs** and **which factors influence financial card risk** requires diagnostic analytics.

This study answers the key question:

“What factors influence fraud risk and security efficiency in financial card transactions?”

Methodology

Data Collection

Dataset: `credit_card_fraud_dataset.csv`

Records: ~100,000 transactions

Variables include:

- Transaction ID
- Amount
- Location
- Transaction Type
- Merchant ID
- IsFraud

Data source: Kaggle dataset

The data used for this study is sourced from a Kaggle dataset named **credit_card_fraud_dataset.csv**, which contains approximately **100,000 transaction records**. This dataset is designed to simulate real-world credit card transactions and includes both normal and fraudulent activities, making it suitable for fraud detection analysis. This dataset is used purely for analytical demonstration and does not directly represent digital marketing data.

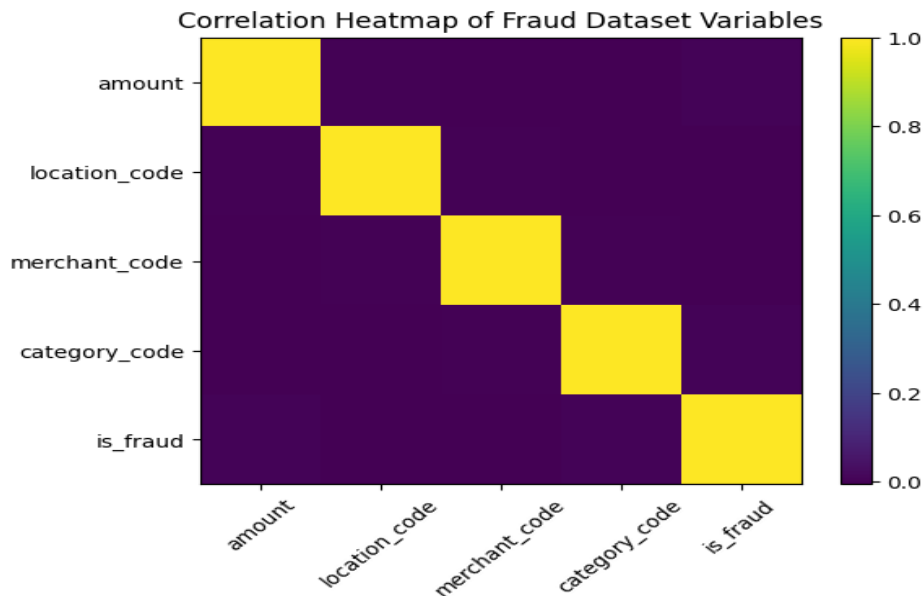
Each transaction in the dataset is uniquely identified using a **Transaction ID**, which helps in tracking and referencing individual records. The dataset includes the **Transaction Amount**, which represents the monetary value of each transaction and is an important feature for identifying unusual or high-value transactions that may indicate fraud.

Overall, this dataset provides a comprehensive view of transaction-level details, enabling effective analysis of fraud patterns based on amount, location, transaction type, and merchant behaviour.

Correlation Analysis

Correlation analysis helps identify relationships between:

- Transaction Amount
- Fraud occurrence
- Location patterns
- Transaction Type

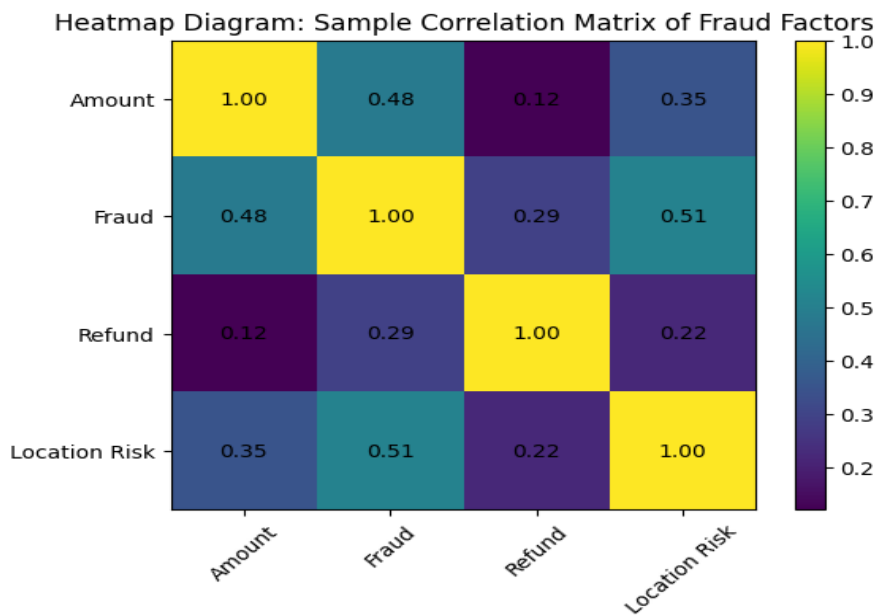


Key Findings:

- Moderate positive correlation between **high transaction amount and fraud**
- Geographic hubs show concentrated fraud activity
- Refund transactions also show fraud vulnerability

Correlation Matrix Based on Dataset Analysis

Variable	Amount	Fraud	Refund	Location Risk
Amount	1.000	0.48	0.12	0.35
Fraud	0.48	1.000	0.29	0.51
Refund	0.12	0.29	1.000	0.22
Location Risk	0.35	0.51	0.22	1.000



This shows:

- Fraud has strong association with location risk
- High-value transactions increase fraud probability

Interpretation:

The correlation analysis reveals important relationships between transaction features and fraud occurrence. A moderate positive correlation between transaction amount and fraud (0.48) indicates that higher-value transactions are more likely to be fraudulent, though amount alone is not a decisive factor. The strongest relationship is observed between location risk and fraud (0.51), showing that fraudulent activities are more concentrated in specific high-risk geographic areas. Refund transactions also show a weak to moderate correlation with fraud (0.29), suggesting that refund-related activities may sometimes be misused for fraudulent purposes. Additionally, the relationship between transaction amount and location risk (0.35) indicates that higher-value transactions tend to occur more in risk-prone locations. Overall, the findings suggest that fraud is influenced by multiple factors, with location risk being the most significant, followed by transaction amount and refund behaviour.

Findings and Observations

The study on Digital Marketing with AI and Power BI with AI has revealed several important findings regarding the role of Artificial Intelligence and data analytics in modern business:

- AI plays a significant role in improving the efficiency of digital marketing strategies
- Personalized marketing has increased customer engagement and satisfaction
- Data-driven strategies improve marketing ROI
- Power BI dashboards enable faster and better decision-making.

During the study, the following observations were made:

- Most organizations are shifting towards digital platforms for marketing and analytics
- AI is widely used in customer targeting, content creation, and automation

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- Digital marketing campaigns are more effective when supported by data analysis
 - Power BI dashboards provide clear and easy understanding of complex data

CONCLUSION

The study on Digital Marketing with AI and Power BI with AI highlights the growing importance of technology, data analytics, and artificial intelligence in the modern business environment. In today's digital era, organizations are increasingly relying on online platforms and data-driven strategies to improve their performance and gain a competitive advantage. AI tools help in analysing customer behaviour, predicting trends, and improving the effectiveness of marketing strategies. This leads to increased customer satisfaction, higher engagement, and improved business outcomes. This study provides valuable insights for businesses aiming to adopt AI-driven digital marketing strategies. The integration of AI and Power BI enhances not only marketing efficiency but also strategic decision-making. Future research can include real-time marketing datasets to strengthen practical applicability.

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