



SNS COLLEGE OF ENGINEERING

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DEPARTMENT OF MANAGEMENT STUDIES

Subject Code & Name : 19BA336 - ARTIFICIAL INTELLIGENCE

Semester & Year : IV & II Year

Unit 2: DATA FOR AI

Topic: Introduction to Alternative Data



Introduction to Alternative Data

Alternative data refers to non-traditional data sources that can provide insights into investment opportunities, economic trends, or business performance. Unlike traditional financial data, such as stock prices, financial statements, and economic reports, alternative data is often sourced from unconventional channels and can include a wide array of information types.



Characteristics of Alternative Data

Non-traditional Sources: Alternative data is gathered from unconventional channels, such as satellite imagery, social media, web traffic, and sensor data.

High Volume and Velocity: The data is often large in volume and generated at a high speed, necessitating advanced data processing techniques.

Unstructured and Semi-structured: Alternative data may not fit neatly into traditional databases and often requires sophisticated methods to extract, transform, and analyze.



Common Sources of Alternative Data

Social Media: Platforms like Twitter, Facebook, and Instagram provide real-time insights into consumer sentiment, brand perception, and market trends.

Web Traffic: Data from website visits, clickstreams, and online behavior can reveal consumer interests and trends.

Geolocation Data: Information from GPS devices, mobile phones, and other location-tracking technologies can show foot traffic patterns, commuting trends, and regional economic activity.

Satellite Imagery: Images from satellites can monitor agricultural health, industrial activity, and urban development.



Sensor Data: Information from IoT devices, such as smart meters and environmental sensors, can provide insights into energy usage, weather conditions, and pollution levels.

Public Records: Government databases, legal filings, and other public documents can offer unique insights into corporate actions and regulatory changes.

Transaction Data: Credit card transactions, e-receipts, and other financial data can reveal consumer spending patterns and economic trends.



Applications of Alternative Data

Investment Strategies: Hedge funds and asset managers use alternative data to gain competitive advantages in identifying investment opportunities, predicting stock prices, and assessing market sentiment.

Risk Management: Financial institutions analyze alternative data to manage risks, detect fraud, and improve credit scoring models.

Business Intelligence: Companies leverage alternative data to optimize supply chains, enhance customer experiences, and refine marketing strategies.

Economic Analysis: Economists use alternative data to track economic indicators, forecast economic trends, and monitor the impact of policy changes.



Benefits of Alternative Data

1. **Competitive Edge:** Provides unique insights that are not available through traditional data sources, giving users a competitive advantage.
2. **Timeliness:** Offers more up-to-date information compared to traditional data, which may be published with a lag.
3. **Comprehensive Insights:** Combines multiple data sources to provide a more holistic view of market trends and consumer behavior



Challenges of Alternative Data

1. **Data Quality:** Ensuring the accuracy, completeness, and reliability of alternative data can be challenging.
2. **Data Integration:** Integrating diverse data sources into a coherent analytical framework requires sophisticated data processing and analysis techniques.
3. **Privacy and Compliance:** Handling personal data from alternative sources necessitates adherence to privacy regulations and ethical considerations.
4. **High Costs:** Acquiring, processing, and analyzing large volumes of alternative data can be resource-intensive.



Thank
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