

ACTIVIDAD #2

Tipo actividad: Reading comprehension: "Real-World Applications of Exploratory Analytics" and Multiple choice activity.

6) Reading comprehension: "Real-World Applications of Exploratory Analytics"

Real-World Applications of Exploratory Analytics

Delve into the world of exploratory data analytics (EDA), a crucial tool in a data analyst's toolkit that aids in summarizing the dominant characteristics of data sets. Discover the myriad of industries that it touches, from professional sports to healthcare, marketing, hospitality, retail, auditing, and more.

Key Takeaways

Exploratory data analytics (EDA) was developed in 1977 by American mathematician John Tukey, and is still widely used today for analyzing and exploring data sets and highlighting their main features.









EDA is used in various industries such as professional sports, history, healthcare, marketing, the hospitality industry, retail, fraud detection, auditing, geography, space travel, and the food industry.

In healthcare, EDA can be used to identify natural patterns in large medical databases and gain important insights into the progression of chronic diseases.

In the hospitality industry, EDA tools like machine learning and Python can be used to predict potential booking cancellations and devise strategies to reduce them.

Starting a career in EDA often involves hands-on classes such as those offered by Noble Desktop, which provide training in the necessary skills for analyzing data like Python and Excel.

Pricing for data analytics courses range from \$915 to \$27,500 depending on the duration and intensity of the course, with numerous bootcamp options available for different levels of students.

What is Exploratory Data Analytics?

Exploratory data analytics (EDA) is a form of data analytics. This field is involved with analyzing and exploring datasets in order to summarize their dominant characteristics. The American mathematician John Tukey developed EDA in 1977, and in the time since, it has continued to play an integral role in the data discovery process.







Once data is collected, it is stored in a data repository. In some instances, the repository is as basic as a spreadsheet; in other cases, it may span many spreadsheets or datasets. The rows within a database pertain to individual records and the columns are the characteristics of the records. However, it can be tedious and taxing to scan data in this format for learning purposes. With the help of EDA, Data Analysts and other stakeholders can incorporate visual tools like statistical graphs and data visualizations to learn as much as possible from the data.

EDA helps Data Analysts and Data Scientists decide the best method for data-source manipulation to yield the most desired answers, which in turn helps locate anomalies and patterns, as well as test assumptions and hypotheses. One of the main reasons EDA is used is to learn what insights can be revealed in data that extend beyond traditional modeling and hypothesis testing. These insights can offer a company or organization a more detailed understanding of not only the variables in a dataset but how they are related to one another.

This article will look specifically at how exploratory data analytics is being applied to various industries in 2021.

Real-World Examples of Exploratory Data Analytics

Exploratory data analytics has applications in many fields, such as:







Professional sports: Sports Analysts rely on EDA to search out the most successful players and teams, as well as to discover the variables that contribute to a team's wins and losses. The insights gathered from sports data also can help those involved with online sports betting at places such as DraftKings to make more informed bets. In addition, EDA is a helpful tool for deciding which players or teams should be selected for a company to endorse.

History: EDA can be applied to create new data about past events. By using data collected from sources such as archeological digs, digitized photos, and text, it's possible for Data Analysts to have a more robust understanding of past events that have remained a mystery for millennia.

Healthcare: EDA is helpful for spotting natural patterns embedded in large stores of medical data. In addition, healthcare networks, health departments, and hospitals store large amounts of data in electronic medical records (EMRs). Although there are strict compliance regulations in place to ensure patients' privacy, those working within healthcare seek out new ways to leverage this data without having to link it to specific individuals. By creating data mining systems to test EMRs, it's possible to gain important insights into the progression of chronic diseases such as kidney disease.

Marketing: EDA sheds insights into various purchasing circumstances, such as why customers are no longer buying a product or why a particular campaign is successful. By understanding the context surrounding those variables, EDA provides Analysts with a strategy for future action.







The hospitality industry: One of the main variables that affect those working in the hospitality industry is the substantial number of booking cancellations that occur. Of the estimated 140 million yearly bookings made online, approximately 40% of these canceled, leading to revenue reservations are loss and complications with distribution management. In order to predict which guests are most likely to cancel their reservations, EDA tools like machine learning and Python can be applied to a dataset to provide information about the features that contribute most to cancellations. This allows those working in hospitality to predict future cancellations in order to devise ways to reduce these numbers, as well as to establish safeguards such as cancellation fees for those who are most likely to cancel.

Retail: EDA can be used by business managers to spot weak areas in a store or franchise in order to suggest areas that can be targeted for increased revenue.

Fraud detection: When EDA data mining techniques are used on Medicare datasets, it's possible to evaluate the risk of a given individual for fraudulent activity.

Auditing: EDA can be applied to several stages of auditing, for both internal and external audit cycles.

Geography: Exploratory spatial data analysis (ESDA) is a branch of EDA that is concerned specifically with geographical data. Those with training in this field can perform a variety of geographical tasks, such as visualizing spatial distributions, spotting physical outliers, and uncovering spatial clusters or patterns.







Space travel: Humans have been venturing to space since 1961, and collecting data on these travels for six decades. By performing EDA on the data collected from hundreds of government and non-government space missions, pertaining to the country of launch, location, and organization performing the launch, it's possible to gain a comprehensive story of the history of mankind traveling to outer space, as well as how technology has evolved over time.

The food industry: When applied to the food industry, EDA can provide a range of insights into customer behavior. For example, exploring large datasets pertaining to customer purchasing patterns can indicate regional taste preferences, such as what the most popular food is in each state. It can also be used to unearth deeper insights into specific food preferences, such as why some customers prefer getting burgers from McDonald's rather than Burger King. In addition, EDA can give customers valuable information pertaining to where they can find the best overall restaurant in their area, the most popular dining options by cuisine type, food establishment that meets certain dietary restrictions, as well as the most affordable local dining options.

Exploratory data analytics has been around for nearly five decades and continues to play an integral role in the data analytics process. In the future, it is possible that automated visual EDA tools will be incorporated into the analytics landscape, and that large-scale EDA will provide new and innovative ways for humans to draw on their natural ability to visually interpret patterns.







Takenfrom:https://www.nobledesktop.com/classes-near-me/blog/exploratory-data-analysis-real-world-applications#:~:text=EDA%20is%20used%20in%20various,travel%2C%20and%20the%20food%20industry.

7) Multiple choice activity.

- 1. When was Exploratory Data Analytics (EDA) developed?
 - A) 1961
 - B) 1977
 - C) 1985
 - D) 1992
- 2. What is the main purpose of Exploratory Data Analytics (EDA)?
 - A) To predict the future
 - B) To summarize dominant characteristics of data sets
 - C) To create new data about past events
 - D) To enforce privacy regulations
- 3. Which industry uses EDA to predict potential booking cancellations?
 - A) Professional sports
 - B) Healthcare
 - C) Hospitality
 - D) Retail









- 4. What training is recommended for starting a career in EDA?
 - A) Cooking classes
 - B) Music lessons
 - C) Hands-on classes in Python and Excel
 - D) Art workshops
- 5. How does EDA help in healthcare?
 - A) Predicting booking cancellations
 - B) Identifying natural patterns in large medical databases
 - C) Spotting weak areas in a store
 - D) Evaluating the risk of fraudulent activity
- 6. What is one of the applications of EDA in marketing?
 - A) Predicting space travel trends
 - B) Analyzing customer purchasing circumstances
 - C) Evaluating the risk of fraudulent activity
 - D) Spotting physical outliers in geographical data
- 7. How much do data analytics courses cost?
 - A) \$50 \$500
 - B) \$1,000 \$10,000
 - C) \$15,000 \$25,000
 - D) \$30,000 \$40,000
- 8. In the hospitality industry, what percentage of online bookings are estimated to be canceled?
 - A) Approximately 10%
 - B) Approximately 20%
 - C) Approximately 30%
 - D) Approximately 40%









- 9. What is Exploratory Spatial Data Analysis (ESDA)?
 - A) A branch of EDA concerned with geographical data
 - B) A type of space travel
 - C) A healthcare data mining technique
 - D) A technique used in the food industry

10. How long has Exploratory Data Analytics been around?

- A) Two decades
- B) Three decades
- C) Four decades
- D) Five decades





