Data Driven Future

Forensic Data Analytics (FDA)

KPMG Forensic

Forensic Technology ("FTech") is a service line within KPMG's Forensic Business Unit that assists clients in their efforts to find key insights from their data so they can make informed decisions and predictions. In today's data-driven world, professionals increasingly rely on data analysis to make competitive decisions, engage effectively with their target audience, and successfully lead projects. One way to meet these targets is through the use of data analysis tools.

Forensic Data Analysis objectives

- Help to discover recurring themes or behaviors in data that can inform decision-making or predict future outcomes.
- Provide logical conclusions from the dataset and what it reveals as to the nature and purpose of the evidence.
- Using forensically sound methods for data acquisition and preservation.
- Analysing data to reconstruct user activities, timelines, and relationships.
- Interpreting findings to establish intent, culpability, and more.
- Reporting findings through detailed documentation, data visualisations, and presentations.

What is forensic data analysis

Forensic Data Analysis ("FDA") is a process that involves analysing substantial data to identify patterns of activities concerning financial and cyber crime. FDA is a comprehensive method of inspecting, cleansing, transforming, and modelling data to discover useful information, draw conclusions, and support decision-making. It is a multifaceted process involving various techniques and methodologies to interpret data from various sources in different formats, both structured and unstructured.

Such an analysis delivers vital information about anomalies, suspicious activities, etc. Businesses can utilise it to counter different crimes, such as financial fraud, data theft, etc

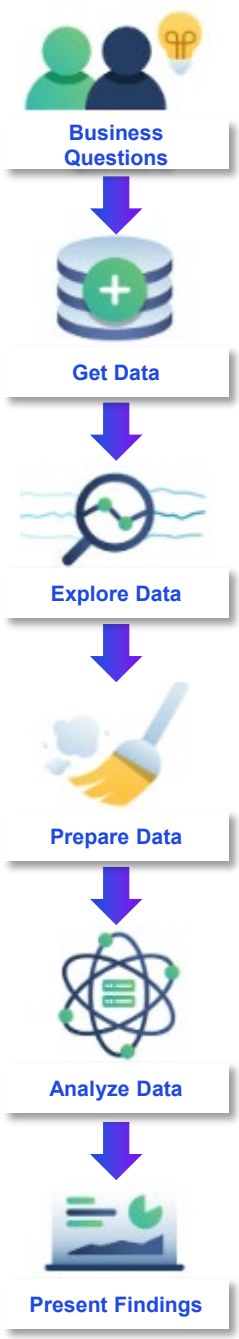
FDA involves collecting, modelling, and transforming data to identify and highlight potential risk areas, detect non-standard or fraudulent activities, and set up internal controls and processes to minimise/mitigate a variety of risks.

Forensic Data Analysis investigation can be used for:

- Cybercrime investigations,
- Quality Control
- Intellectual property theft
- Compliance Audits
- Financial Fraud, Data breach investigation, etc.

"Our team of highly skilled, certified forensics examiners can help companies to uncover and interpret electronic data effectively and cost efficiently while ensuring legal admissibility of the digital evidence."

Process flow



The Forensic Data Analysis Process

Step 1: Defining objectives and questions

The first step in the data analysis process is to define the objectives and formulate clear, specific questions that your analysis aims to answer. This step is crucial as it sets the direction for the entire process. It involves understanding the problem or situation at hand, identifying the data needed to address it, and defining the metrics or indicators to measure the outcomes.

Step 2: Data collection

Once the objectives and questions are defined, the next step is to collect the relevant data. This can be done through various methods such as surveys, interviews, observations, or extracting from existing databases. The data collected can be quantitative (numerical) or qualitative (non-numerical), depending on the nature of the problem and the questions being asked.

Step 3: Data cleaning

Data cleaning, also known as data cleansing, is a critical step in the data analysis process. It involves checking the data for errors and inconsistencies, and correcting or removing them. This step ensures the quality and reliability of the data, which is crucial for obtaining accurate and meaningful results from the analysis.

Step 4: Data analysis

Once the data is cleaned, it's time for the actual analysis. This involves applying statistical or mathematical techniques to the data to discover patterns, relationships, or trends. There are various tools and software available for this purpose, such as Excel, SQL Server and Power BI.

Step 5: Data interpretation and visualization

After the data is analysed, the next step is to interpret the results and visualise them in a way that is easy to understand. This could involve creating charts, graphs, or other visual representations of the data. Data visualisation helps to make complex data more understandable and provides a clear picture of the findings.

Step 6: Data storytelling

The final step in the data analysis process is data storytelling. This involves presenting the findings of the analysis in a narrative form that is engaging and easy to understand. Data storytelling is crucial for communicating the results to non-technical audiences and for making data-driven decisions.

Forensic Data Analysis Tools

FDA professionals use FDA tools such software programs, applications, and other aids to analyse data sets in ways that characterise the big picture depicted by the information contained in the data set, and provides useful information for meaningful insights, predictions, and decision-making purposes. We use the following tools to deliver on our FDA services:

Power BI

Contact us

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