Graduate Certificate in Social Care Auditing and Compliance

Information Systems and Data Analysis for Social Care Auditors

Data Analysis:
The process of inspecting, cleaning, transforming, and modeling data to discover useful information, draw conclusions, and support decision-making.

Data Mining:
The process of discovering patterns and knowledge from large amounts of data. The data sources can include databases, data warehouses, the internet, and other information repositories.

Data Warehouse:
A large storage repository that stores current and historical data in one single place. It is used for creating analytical reports for knowledge workers throughout the enterprise.

Database Management System (DBMS):
A software system that enables users to define, create, maintain, and manipulate databases.

Decision Support System (DSS):
A computer-based information system that supports business and organizational decision-making activities.

Enterprise Resource Planning (ERP):
A software system that integrates all aspects of an operation, including planning, purchasing, inventory, sales, marketing, finance, and human resources.

Geographic Information System (GIS):
A system designed to capture, store, manipulate, analyze, manage, and present all types of geographical data.

Health Information Systems:
Information systems designed to support the collection, processing, storage, and distribution of health care information.

Information System (IS):
A collection of hardware, software, data, people, and processes that work together to provide information needed by an organization.

Knowledge Management (KM):

The process of creating, sharing, using, and managing the knowledge and information within an organization.

Master Data Management (MDM):
The practice of managing and maintaining high-quality master data, which is the consistent and uniform set of identifiers and extended attributes that describes the core entities of the enterprise including customers, prospects, citizens, suppliers, sites, hierarchies, and chart of accounts.

Relational Database:
A type of database that stores data in tables and relationships. It is based on the relational model, which was developed by Dr. E.F. Codd in 1970.

Social Care Data Analysis:
The process of analyzing social care data to identify trends, patterns, and insights that can inform decision-making and improve outcomes for service users.

System Development Life Cycle (SDLC):
The process of planning, creating, testing, and deploying an information system.

Transaction Processing System (TPS):
A computer system used for managing, processing, and recording transactions in an organization.

Business Intelligence (BI):
A technology-driven process for analyzing data and presenting actionable information to help executives, managers, and other corporate end users make informed business decisions.

Cloud Computing:
The delivery of different services through the Internet, including data storage, servers, databases, networking, and software.

Data Governance:
The overall management of the availability, usability, integrity, and security of data.

Data Lake:
A large storage repository that holds a vast amount of raw data in its native format until it is needed.

Data Mart:
A subset of a data warehouse, designed to serve a specific business unit or group of users.

Data Visualization:
The representation of data in a graphical format. It helps to analyze and illuminate patterns, trends, and outliers in groups of data.

Data Warehouse Automation:
The automation of the process of designing, creating, and maintaining data warehouses.

Extract, Transform, Load (ETL):
The process of extracting data from various sources, transforming it into a format suitable for analysis, and loading it into a data warehouse or data mart.

Machine Learning:
A type of artificial intelligence (AI) that allows a system to learn and improve from experience without being explicitly programmed.

Predictive Analytics:
The use of data, statistical algorithms, and machine learning techniques to identify the likelihood of future outcomes based on historical data.

Structured Data:
Data that has a well-defined structure or schema, which means that each data element has a clearly defined data type and format, and is organized in a specific way.

Unstructured Data:
Data that does not have a pre-defined structure or schema and can be in the form of text, images, audio, or video.

Big Data:
Extremely large data sets that may be analyzed computationally to reveal patterns, trends, and associations, especially relating to human behavior and interactions.

Data Lakehouse:
A new, open data management architecture that combines the best elements of data lakes and data warehouses.

Data Quality:
The degree to which data is accurate, complete, consistent, and timely.

Data Science:
An interdisciplinary field that uses scientific methods, processes, algorithms, and systems to extract knowledge and insights from structured and unstructured data.

Data Steward:
A person who is responsible for managing and maintaining the quality, security, and usability of data.

Data Wrangling:
The process of cleaning, structuring, and enriching raw data into a desired format for better decision

making.

Digital Transformation:
The integration of digital technology into all areas of a business, fundamentally changing how it operates and delivers value to its customers.

Internet of Things (IoT):
The network of physical devices, vehicles, buildings, and other items embedded with electronics, software, sensors, and network connectivity that enables these objects to collect and exchange data.

Real-Time Data Processing:
The processing of data as soon as it is generated, allowing for immediate insights and decision making.

Robotic Process Automation (RPA):
The use of software robots or "bots" to automate routine tasks and processes, freeing up human workers for more complex tasks.

Shadow IT:
The use of information systems, devices, software, applications, and services without explicit organizational approval.

Smart Cities:
Cities that use technology and data to improve infrastructure, public services, and quality of life for citizens.

Social Media Analytics:
The process of collecting data from social media sites and analyzing that data to make business decisions.

Time Series Analysis:
The statistical analysis of time series data, in which the data points are recorded at successive times.

Artificial Intelligence (AI):
The simulation of human intelligence processes by machines, especially computer systems.

Blockchain:
A decentralized, digital ledger that records transactions across multiple computers in a secure and transparent manner.

Chatbot:
A computer program designed to simulate conversation with human users, especially over the Internet.

Cognitive Computing:
The use of artificial intelligence and machine learning to mimic the way the human brain works, enabling computers to understand, learn, and interact naturally with humans.

Deep Learning:
A subset of machine learning that uses artificial neural networks with many layers (also known as deep neural networks) to learn and represent data.

Natural Language Processing (NLP):
A field of computer science, artificial intelligence, and linguistics concerned with the interaction between computers and human (natural) languages.

Recommendation System:
A system that suggests items or actions to users based on their preferences, behavior, and other data.

Sentiment Analysis:
The use of natural language processing, text analysis, and computational linguistics to identify and extract subjective information from source materials.

Virtual Assistant:
A digital assistant that uses artificial intelligence to provide services or perform tasks for an individual