
Graduate Certificate in Accountancy and Artificial Intelligence

Audit and Artificial Intelligence

Audit and Artificial Intelligence Key Terms and Vocabulary

Audit and Artificial Intelligence are two critical fields in the realm of accounting that are increasingly intersecting to enhance efficiency, accuracy, and effectiveness in financial reporting and assurance processes. Understanding the key terms and vocabulary associated with Audit and Artificial Intelligence is essential for professionals looking to navigate the complexities of these evolving domains. Let's delve into the essential terms that form the foundation of Audit and Artificial Intelligence.

Audit

An **audit** is an independent examination of financial information of an entity, whether profit-oriented or not, irrespective of its size or legal form, when such an examination is conducted with the intent to express an opinion thereon. Audits provide assurance to stakeholders regarding the accuracy and reliability of financial statements.

External Audit: An audit conducted by an independent auditor to provide an opinion on the fairness of the financial statements of an entity.

Internal Audit: An audit function within an organization that evaluates and improves the effectiveness of risk management, control, and governance processes.

Audit Risk: The risk that the auditor expresses an inappropriate audit opinion when the financial statements are materially misstated.

Materiality: The magnitude of an omission or misstatement of accounting information that, in the light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would have been changed or influenced.

Sampling: The process of selecting a subset of the population of interest for inspection to obtain an estimate of the whole.

Audit Evidence: The information used by auditors in arriving at the conclusions on which the audit opinion is based.

Audit Trail: A step-by-step record by which accounting or trade data can be traced to its source.

Going Concern: The assumption that an entity will continue to operate in the foreseeable future without the need or intention to liquidate.

Material Weakness: A deficiency, or a combination of deficiencies, in internal control over financial reporting that creates a reasonable possibility that a material misstatement of the financial statements will

not be prevented or detected in a timely manner.

Artificial Intelligence (AI)

Artificial Intelligence (AI): The simulation of human intelligence processes by machines, especially computer systems. AI encompasses machine learning, natural language processing, robotics, and other technologies.

Machine Learning: A subset of AI that enables machines to learn from data and improve their performance on tasks without being explicitly programmed.

Deep Learning: A type of machine learning that uses neural networks with many layers to learn complex patterns in data.

Natural Language Processing (NLP): A branch of AI that enables computers to understand, interpret, and generate human language.

Robotics: The interdisciplinary branch of engineering and science that deals with the design, construction, operation, and use of robots.

Data Mining: The process of discovering patterns in large data sets involving methods at the intersection of machine learning, statistics, and database systems.

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

Algorithm: A set of rules or instructions designed to perform a specific task.

Neural Network: A series of algorithms that mimic the operations of the human brain to recognize patterns.

Supervised Learning: A type of machine learning where the model is trained on a labeled dataset to make predictions or decisions.

Unsupervised Learning: A type of machine learning where the model is trained on an unlabeled dataset to discover patterns or relationships.

Reinforcement Learning: A type of machine learning where an agent learns to make decisions by interacting with an environment and receiving rewards or penalties.

Overfitting: A modeling error that occurs when a model learns the noise in the training data rather than the underlying pattern.

Underfitting: A modeling error that occurs when a model is too simple to capture the underlying pattern in the data.

Intersection of Audit and Artificial Intelligence

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- Data Analytics**: The process of analyzing raw data to draw conclusions about that information. Data analytics techniques can be used in both audits and AI to derive meaningful insights.
- Fraud Detection**: The process of using AI algorithms to identify patterns or anomalies in financial data that may indicate fraudulent activities.
- Robotic Process Automation (RPA)**: The use of software robots or "bots" to automate repetitive tasks in auditing processes, enhancing efficiency and accuracy.
- Continuous Auditing**: The process of performing audit procedures on a more frequent basis using automated tools and techniques.
- Audit Automation**: The use of AI and machine learning algorithms to automate audit processes, reducing manual effort and improving audit quality.
- Blockchain Technology**: A decentralized, distributed ledger technology that can enhance audit processes by providing transparent and immutable records of transactions.
- Cybersecurity**: The practice of protecting systems, networks, and programs from digital attacks. AI can be used in cybersecurity audits to detect and prevent cyber threats.
- Regulatory Compliance**: Ensuring that an organization adheres to laws, regulations, and standards. AI can help automate compliance checks and monitoring.
- Audit Analytics**: The use of data analysis tools and techniques in audits to improve the quality and efficiency of audit procedures.
- Cloud Computing**: The delivery of computing services over the internet. Cloud computing can provide auditors with flexible access to data and tools.
- Natural Language Generation (NLG)**: The process of generating human-readable text from structured data. NLG can be used in audit reporting to create narratives from audit findings.
- Ethical Considerations**: The ethical implications of using AI in audits, including issues related to bias, privacy, and transparency.
- Audit Quality**: The standard of work performed by auditors that provides reasonable assurance that financial statements are free from material misstatement.
- Data Privacy**: The protection of personal data from unauthorized access. Auditors must ensure compliance with data privacy regulations when using AI technologies.
- Interpretability**: The ability to explain and understand how AI algorithms make decisions, especially in audit contexts where transparency is crucial.
- Robustness**: The ability of AI algorithms to perform consistently and accurately across different datasets and conditions.
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AI Ethics: The ethical principles that guide the development and use of AI technologies, including fairness, accountability, and transparency.

Bias: Systematic errors in AI algorithms that lead to unfair outcomes, especially in areas such as audit risk assessment.

Explainability: The ability to provide clear explanations for AI decisions and predictions, particularly in audits where stakeholders need to understand the reasoning behind audit findings.

Scalability: The capability of AI systems to handle increasing volumes of data and tasks without significant performance degradation.

Audit Documentation: The record of audit procedures performed, evidence obtained, and conclusions reached during an audit engagement.

Audit Planning: The process of developing an overall audit strategy and detailed audit plan to address audit risks and objectives.

Audit Report: The formal communication of audit findings and opinions to stakeholders, including management, board of directors, and regulatory bodies.

Audit Committee: A subcommittee of the board of directors responsible for overseeing the financial reporting process, internal controls, and audit functions.

Audit Independence: The concept that auditors must be free from any conflicts of interest that could impair their objectivity and integrity in conducting audits.

Audit Sampling: The process of selecting a representative sample of items for testing in an audit to obtain sufficient and appropriate audit evidence.

Audit Procedures: The specific tests and inquiries performed by auditors to obtain audit evidence and assess the reliability of financial information.

Audit Program: A set of audit procedures and instructions that guide auditors in conducting an audit engagement.

Audit Risk Model: A framework used by auditors to assess and respond to audit risks based on the likelihood and impact of material misstatements.

Audit Software: Computer programs designed to assist auditors in performing audit procedures, analyzing data, and documenting audit work.

Audit Trail: A chronological record that provides evidence of the sequence of activities or transactions in an accounting system.

Compliance Audit: An audit that evaluates an organization's adherence to laws, regulations, and internal policies.

Internal Control: The policies, procedures, and mechanisms implemented by an organization to safeguard assets, ensure accuracy of financial information, and promote operational efficiency.

Integrated Audit: An audit that combines the examination of financial statements with tests of internal controls over financial reporting.

Performance Audit: An audit that assesses the economy, efficiency, and effectiveness of an organization's programs, activities, or functions.

Quality Control: The policies and procedures implemented by an audit firm to ensure that audits are performed in accordance with professional standards and regulatory requirements.

Risk Assessment: The process of identifying and evaluating risks that could affect the achievement of audit objectives.

Sarbanes-Oxley Act (SOX): Legislation passed in the United States that sets requirements for public company boards, management, and audit committees regarding financial reporting and internal controls.

Audit Firm: A professional services firm that provides audit, assurance, and advisory services to clients.

Client Acceptance: The process of evaluating and accepting new audit clients based on factors such as reputation, integrity, and business risk.

Engagement Letter: A written agreement between an auditor and a client that outlines the terms and scope of an audit engagement.

Peer Review: A process in which audit work performed by one firm is reviewed by another firm to ensure compliance with professional standards.

Quality Assurance: The systematic process of ensuring that audit work meets the quality standards established by the audit firm.

Professional Skepticism: The attitude of questioning and critically assessing audit evidence and management representations during an audit engagement.

Independence: The state of being free from relationships or influences that might impair objectivity or integrity in performing audit work.

Audit Committee Oversight: The responsibility of the audit committee to oversee the financial reporting process, internal controls, and audit functions of an organization.

External Auditor: An independent auditor appointed to conduct audits of financial statements and provide an opinion on their fairness.

Internal Auditor: An audit professional employed by an organization to evaluate and improve its risk management, control, and governance processes.

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- **Regulatory Environment****: The laws, regulations, and standards that govern the practice of auditing and assurance services.
- **Audit Report****: The formal communication of audit findings and opinions issued by the auditor to stakeholders.
- **Management Representation****: Written or oral statements made by management to auditors regarding the financial statements and related matters.
- **Audit Findings****: The results of audit procedures and tests that provide the basis for the auditor's opinion on the financial statements.
- **Audit Planning Memorandum****: A document that outlines the audit strategy, scope, and objectives for an audit engagement.
- **Audit Program****: A set of detailed audit procedures and instructions that guide auditors in conducting an audit.
- **Audit Evidence****: Information used by auditors to support their conclusions and opinions on the financial statements.
- **Substantive Testing****: Audit procedures performed to obtain direct evidence about the completeness, accuracy, and validity of account balances and transactions.
- **Analytical Procedures****: Evaluation of financial information through analysis of plausible relationships among both financial and non-financial data.
- **Internal Control Testing****: Procedures performed by auditors to assess the effectiveness of an organization's internal controls over financial reporting.
- **Material Misstatement****: A misstatement in the financial statements that could influence the decisions of users based on the financial information.
- **Audit Opinion****: The conclusion reached by the auditor on whether the financial statements present a true and fair view in accordance with accounting standards.
- **Going Concern Assumption****: The presumption that an entity will continue to operate in the foreseeable future without the need for liquidation or cessation of operations.
- **Audit Working Papers****: The records kept by auditors of their audit procedures, findings, and conclusions during an audit engagement.
- **Peer Review****: An independent evaluation of an audit firm's quality control system and compliance with professional standards.
- **International Standards on Auditing (ISA)****: A set of guidelines issued by the International Auditing and Assurance Standards Board (IAASB) to promote consistency in auditing practices globally.
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- **American Institute of Certified Public Accountants (AICPA)**:** The professional organization of certified public accountants in the United States that sets auditing standards and guidelines.
- **Public Company Accounting Oversight Board (PCAOB)**:** A regulatory body that oversees the audits of public companies to protect investors and promote audit quality.
- **Financial Accounting Standards Board (FASB)**:** The organization responsible for establishing accounting and reporting standards in the United States.
- **Generally Accepted Auditing Standards (GAAS)**:** The standard framework of guidelines for auditors to conduct audits in the United States.
- **International Financial Reporting Standards (IFRS)**:** A set of accounting standards developed by the International Accounting Standards Board (IASB) for the preparation of financial statements.
- **GAAP (Generally Accepted Accounting Principles)**:** The standard framework of accounting principles, standards, and procedures used by companies to prepare financial statements in the United States.
- **Auditor Independence**:** The concept that auditors must be free from any relationships or influences that might compromise their objectivity or integrity in conducting audits.
- **Audit Firm Rotation**:** The practice of requiring companies to periodically change their external audit firm to promote auditor independence and objectivity.
- **Audit Quality Indicators**:** Metrics and measures used to assess the quality of audit engagements, such as audit fees, audit hours, and client satisfaction.
- **Audit Committee Chair**:** The leader of the audit committee responsible for overseeing the financial reporting process, internal controls, and audit functions.
- **Audit Sampling Methods**:** Techniques used by auditors to select a representative sample of items for testing in an audit engagement.
- **Audit Documentation Standards**:** Requirements for auditors to document their work, findings, and conclusions in a clear and organized manner.
- **Risk-Based Audit Approach**:** An audit methodology that focuses on identifying and assessing audit risks to prioritize audit procedures and resources.
- **Audit Engagement Letter**:** A written agreement between an auditor and a client that outlines the terms, scope, and objectives of an audit engagement.
- **Audit Review Process**:** A quality control procedure in which audit work is reviewed by senior auditors or partners to ensure compliance with professional standards.
- **Audit Report Issuance**:** The process of finalizing and issuing the audit report to stakeholders, including management, board of directors, and regulatory bodies.
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****Audit Working Papers Retention****: The practice of retaining audit working papers for a specified period to comply with professional standards and legal requirements.

****Audit Completion Memorandum****: A document that summarizes the audit findings, conclusions, and recommendations at the end of an audit engagement.

****Audit Engagement Quality Control Review****: A review process conducted by a senior auditor or partner to evaluate the quality and compliance of audit work.

****Audit Risk Assessment Process****: The methodology used by auditors to identify, assess, and respond to audit risks based on the likelihood and impact of misstatements.

****Audit Sampling Plan****: A structured approach to selecting a representative sample of items for testing in an audit engagement, including sample size and selection criteria.

****Audit Report Drafting****: The process of preparing the initial draft of the audit report, including the auditor's opinion, findings, and recommendations.

****Audit Completion Meeting****: A meeting between auditors and management to discuss the audit findings, conclusions, and recommendations before issuing the final audit report.

****Audit Quality Control Review Team****: A group of senior auditors or partners responsible for reviewing and evaluating the quality of audit work performed on an engagement.

****Audit Firm Independence Policy****: The policies and procedures implemented by an audit firm to ensure auditor independence and compliance with professional standards and regulations.

****Audit Risk Assessment Matrix****: A tool used by auditors to document and assess audit risks based on their likelihood and potential impact on financial statements.

****Audit Sampling Precision****: The level of confidence and reliability desired in the results of audit sampling, influenced by factors such as materiality and audit risk.

****Audit Report Format****: The structure and content of the audit report, including the auditor's opinion, findings, scope, and limitations of the audit.

****Audit Working Papers Review****: A process in which audit work papers are reviewed by senior auditors or partners to ensure completeness, accuracy, and compliance with professional standards.

****Audit Engagement Monitoring****: The ongoing supervision and evaluation of audit engagements to ensure compliance with quality control policies and professional standards.

****Audit Risk Assessment Criteria****: Factors used by auditors to evaluate and prioritize audit risks, such as inherent risk, control risk, and detection risk.

****Audit Sampling Technique Selection****: The process of choosing the appropriate sampling method based on the nature of the audit engagement, data availability, and audit objectives.

****Audit Report Distribution****: The dissemination of the final audit report to stakeholders, including management, board of directors, regulatory bodies, and other interested parties.

****Audit Quality Control Framework****: The policies, procedures, and controls implemented by an audit firm to ensure that audit engagements are conducted in accordance with professional standards and regulatory requirements.

****Audit Sampling Error****: The difference between the results of audit sampling and the true value in the population, influenced by factors such as sample size, selection bias, and estimation methods.

****Audit Report Review Process****: A quality control procedure in which the draft audit report is reviewed by senior auditors or partners to ensure accuracy, completeness, and compliance with professional standards.

****Audit Firm Independence Assurance****: The measures taken by audit firms to provide confidence to stakeholders that auditors are independent and unbiased in conducting audit engagements.

****Audit Risk Assessment Documentation****: The documentation of audit risk assessment procedures, findings, conclusions, and recommendations in audit working papers to support the audit opinion.

****Audit Sampling Size Determination****: The process of calculating the appropriate sample size for auditing procedures based on factors such as materiality, audit risk, and desired confidence level.

****Audit Report Approval Process****: The formal review and approval of the audit report by senior auditors, partners, and other stakeholders before issuance to ensure accuracy, consistency, and compliance with professional standards.

****Audit Quality Control Review Checklist****: A tool used by auditors to ensure that audit work meets quality control standards, including criteria related to audit planning, execution, documentation, and reporting.

****Audit Sampling Methodology Evaluation****: The assessment of the effectiveness and reliability of audit sampling techniques used in an engagement to determine if the sample is representative and sufficient to support audit conclusions.

****Audit Report Disclosure Requirements****: The mandatory information that must be included in the audit report to provide stakeholders with a clear understanding of the audit scope, findings, conclusions, and recommendations.

****Audit Firm Independence Monitoring****: The ongoing evaluation of audit firm practices and processes related to auditor independence to detect and address any threats to independence that may arise during audit engagements.

****Audit Risk Assessment Tool****: A software application or template used by auditors to document, evaluate, and communicate audit risks, including risk factors, likelihood, impact, and planned audit procedures.

****Audit Sampling Process Improvement****: The continuous enhancement of audit sampling techniques, procedures, and tools to increase efficiency, accuracy, and reliability in selecting and testing samples for

audit engagements.

****Audit Report Quality Assurance Review****: A final review of the audit report conducted by senior auditors, partners, or quality control reviewers to ensure that the report meets quality standards, is free from errors, and complies with professional requirements before issuance.

****Audit Firm Independence Training****: The education and training provided to audit firm personnel to raise awareness of independence requirements, ethical considerations, and best practices to promote a culture of independence and integrity in audit engagements.

****Audit Sampling Plan Development****: The creation of a detailed sampling plan for an audit engagement, including objectives, sample size determination, selection criteria, testing procedures, documentation requirements, and quality control measures.

****Audit Report Issuance Process****: The formal procedure followed by auditors to review, finalize, approve, and distribute the audit report to stakeholders, including management, board of directors, regulatory