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Undergraduate Certificate in Artificial Intelligence for Indirect Tax Management

## Capstone Project.

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**Artificial Intelligence (AI):** the simulation of human intelligence processes by machines, especially computer systems. These processes include learning (the acquisition of information and rules for using the information), reasoning (using the rules to reach approximate or definite conclusions), and self-correction.

**Capstone Project:** A project that serves as a culminating experience for students in the Undergraduate Certificate in AI for Indirect Tax Management program. The Capstone Project requires students to apply the knowledge and skills they have acquired throughout the program to a real-world problem in indirect tax management.

**Chatbot:** A computer program designed to simulate conversation with human users, especially over the Internet. Chatbots can be used for a variety of tasks, such as customer service, scheduling appointments, and providing information.

**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.

**Deep Learning:** A subset of machine learning that is based on artificial neural networks with representation learning. Deep learning models are trained on large datasets and can learn to represent data by multiple levels of abstraction.

**Direct Taxes:** Taxes that are levied on the income or profits of individuals and businesses. Examples of direct taxes include income tax, corporate tax, and capital gains tax.

**E-commerce:** The buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the Internet. These business transactions occur either business-to-business, business-to-consumer, consumer-to-consumer or consumer-to-business.

**Excise Tax:** A tax on the sale or use of a specific goods or services, or on certain activities. Excise taxes are often levied on goods that are considered harmful, such as alcohol and tobacco, or on activities that are considered harmful to the environment, such as gasoline.

**Fraud Detection:** The process of identifying and preventing fraud, which is the use of deception to obtain an unfair or unlawful advantage. Fraud detection can be used in a variety of industries, including finance, insurance, and healthcare.

**Indirect Taxes:** Taxes that are levied on the sale of goods and services, rather than on the income or profits of individuals and businesses. Examples of indirect taxes include sales tax, value-added tax (VAT), and goods and services tax (GST).

**Machine Learning:** A type of artificial intelligence that enables machines to learn and improve from

experience without being explicitly programmed. Machine learning algorithms use statistical methods to analyze and draw inferences from patterns in data.

**Neural Network:** A type of machine learning model that is inspired by the structure and function of the human brain. Neural networks consist of interconnected layers of nodes, or artificial neurons, and can learn to represent data by multiple levels of abstraction.

**Natural Language Processing (NLP):** A field of artificial intelligence that focuses on the interaction between computers and human language. NLP enables machines to understand, interpret, and generate human language in a valuable way.

**Predictive Analytics:** The use of statistical algorithms and machine learning techniques to identify the likelihood of future outcomes based on historical data. Predictive analytics can be used to make predictions about a wide range of phenomena, including customer behavior, financial markets, and weather patterns.

**Robotic Process Automation (RPA):** The use of software robots or "bots" to automate routine, repetitive, and predictable tasks. RPA can be used to improve efficiency, reduce errors, and lower costs in a variety of industries, including finance, healthcare, and manufacturing.

**Sales Tax:** A tax that is levied on the sale of goods and services. Sales tax is usually calculated as a percentage of the sale price and is collected by the seller from the buyer at the time of sale.

**Supervised Learning:** A type of machine learning that involves training a model on a labeled dataset, where the correct answers are provided. The model is then tested on a separate dataset to evaluate its performance.

**Tax Compliance:** The process of ensuring that individuals and businesses are in compliance with tax laws and regulations. Tax compliance can involve a variety of tasks, such as filing tax returns, paying taxes, and maintaining accurate records.

**Tax Evasion:** The use of illegal means to avoid paying taxes. Tax evasion can include activities such as underreporting income, overstating deductions, and hiding assets.

**Tax Fraud:** The use of deception to obtain an unfair or unlawful advantage in relation to taxes. Tax fraud can include activities such as filing false tax returns, claiming false deductions, and failing to file tax returns.

**Tax Risk Management:** The process of identifying, assessing, and mitigating risks related to taxes. Tax risk management can involve a variety of activities, such as monitoring tax laws and regulations, implementing tax compliance procedures, and maintaining accurate tax records.

**Transfer Pricing:** The pricing of goods and services that are transferred between related entities within a multinational corporation. Transfer pricing is a complex issue that can have significant tax implications, as it can be used to shift profits from high-tax to low-tax jurisdictions.

**Unsupervised Learning:** A type of machine learning that involves training a model on an unlabeled dataset, where the correct answers are not provided. The model is then used to discover patterns and structure in

the data.

**Value-Added Tax (VAT):** A type of indirect tax that is levied on the value added to a product or service at each stage of production and distribution. VAT is a consumption tax that is usually calculated as a percentage of the sale price and is collected by the seller from the buyer at the time of sale.

**Wayfair Decision:** A landmark ruling by the United States Supreme Court in 2018 that allows states to require remote sellers to collect sales tax on online sales, even if the seller does not have a physical presence in the state. The Wayfair decision overturned a long-standing legal precedent that had limited the ability of states to collect sales tax from remote sellers.