

Glossary for AI terminology



Terms relating to AI

Artificial Intelligence (AI): The simulation of human intelligence processes by machines, typically through the use of algorithms and data.

Machine Learning (ML): A subset of AI that enables machines to learn and improve from experience without being explicitly programmed. It involves the development of algorithms that allow computers to automatically learn patterns and make predictions or decisions.

Deep Learning: A subfield of machine learning that focuses on the development and use of artificial neural networks, inspired by the structure and function of the human brain. Deep learning models are capable of automatically learning and extracting complex patterns and representations from large amounts of data.

Neural Network: A computational model composed of interconnected nodes (neurons) that are organised in layers. It processes information in a way similar to the human brain, allowing for pattern recognition, learning, and decision-making.

Natural Language Processing (NLP): The branch of AI concerned with the interaction between computers and human language. It involves the processing and understanding of human language, including tasks such as text analysis, sentiment analysis, and language generation.

Computer Vision: The field of AI that focuses on enabling computers to interpret and understand visual information from images or videos. It involves tasks such as image recognition, object detection, and image segmentation.

Reinforcement Learning: A type of machine learning where an agent learns to interact with an environment to maximise rewards or minimise penalties. The agent receives feedback in the form of rewards or punishments for its actions and uses this information to improve its decision-making.

Algorithm: A set of step-by-step instructions or rules followed to solve a specific problem or complete a task. In the context of AI, algorithms are used to process data, make predictions, or train models.

Training Data: The data used to train a machine learning or deep learning model. It consists of input examples (features) and their corresponding correct output or label.

Model: In the context of AI, a model refers to a mathematical or computational representation of a system, process, or concept. It is trained using data and used to make predictions or perform specific tasks.

Supervised Learning: A type of machine learning where the model is trained using labeled examples. The training data includes input features and their corresponding correct output labels, allowing the model to learn patterns and make predictions on new, unseen data.

Unsupervised Learning: A type of machine learning where the model learns from unlabeled data, without specific output labels. The goal is to discover underlying patterns or structures in the data.

Bias: In AI, bias refers to systematic errors or prejudices in the data, algorithms, or decision-making processes that lead to unfair or discriminatory outcomes. It can result from biased training data or biased algorithm design.

Ethics: The study of moral principles and values that govern human behavior. In the context of AI, ethics focuses on the responsible development, deployment, and use of AI systems, considering potential societal impacts, privacy, bias, and fairness.

Explainability: The ability to understand and explain the decision-making process of AI systems. It is particularly important for complex models like deep learning, where the reasoning behind predictions may not be readily apparent.

Autonomous System: A system or agent that can operate, make decisions, and take actions independently without continuous human intervention. Autonomous systems are often powered by AI technologies.

Data Mining: The process of discovering patterns, relationships, or insights from large datasets. It involves extracting and analysing data to uncover valuable information or knowledge.

Transfer Learning: A technique in machine learning where knowledge gained from training one model on one task is applied to a different but related task. It allows models to leverage pre-existing knowledge.

Terms relating to AI in Contact Centres

Intelligent Virtual Agent (IVA): An AI-powered chatbot or virtual assistant that interacts with customers in natural language, providing automated assistance and resolving common queries or issues.

Natural Language Processing (NLP): The branch of AI that enables computers to understand and interpret human language. NLP technologies are used in chatbots and virtual agents to process customer inquiries and provide relevant responses.

Speech Recognition: The technology that converts spoken language into written text. It allows Contact Centre systems to understand and analyse customer voice interactions, such as phone calls or voice-based chatbots.

Sentiment Analysis: The process of analysing and determining the sentiment or emotional tone of customer interactions. AI-powered sentiment analysis can identify positive, negative, or neutral customer sentiments, helping Contact Centres gauge customer satisfaction.

Voice Biometrics: The use of AI algorithms to identify and authenticate individuals based on their unique vocal characteristics. Voice biometrics can be used for secure customer authentication in Contact Centres, replacing traditional methods like PINs or passwords.

Call Routing Optimisation: The application of AI algorithms to intelligently route incoming customer calls to the most appropriate agent or department. It considers factors such as customer profile, agent skills, and historical data to ensure efficient call handling.

Predictive Analytics: The use of historical data and AI algorithms to predict future outcomes or behaviors. In Contact Centres, predictive analytics can be used to anticipate customer needs, optimise staffing levels, and improve customer experience.

Chatbot: A computer program or AI application that interacts with customers in real-time through a chat interface. Chatbots in Contact Centres provide automated responses to customer inquiries and assist with issue resolution.

Virtual Queue Management: The use of AI to intelligently manage customer wait times and queues in Contact Centres. It can estimate waiting times, provide updates, and offer customers options such as call-backs or self-service alternatives.

Knowledge Base: A centralised repository of information, documents, and frequently asked questions (FAQs) that AI systems in Contact Centres can access. Knowledge bases enable quick and accurate responses to customer inquiries.

Agent Assist: AI-powered tools or systems that provide real-time guidance and suggestions to Contact Centre agents during customer interactions. Agent assist technologies can help agents with relevant information, responses, or next steps.

Customer Journey Analytics: The analysis of customer interactions and touchpoints across multiple channels and stages of their journey. AI-powered customer journey analytics can identify patterns, bottlenecks, and opportunities for improvement in Contact Centre operations.

Emotion Detection: The use of AI algorithms to identify and analyse customer emotions based on vocal cues or text analysis. Emotion detection in Contact Centres helps agents understand customer sentiments and tailor their responses accordingly.

Robotic Process Automation (RPA): The use of software robots or AI-driven automation tools to automate repetitive and rule-based tasks in Contact Centres, such as data entry, form filling, or updating customer information.

Self-Service Channels: AI-powered channels or tools that allow customers to find information, resolve issues, or complete transactions independently, without agent assistance. Examples include chatbots, interactive voice response (IVR), and knowledge bases.

Quality Assurance (QA) Automation: The use of AI technologies to automate the monitoring and evaluation of Contact Centre interactions for quality and compliance purposes. AI-powered QA tools can analyse customer calls or chats and provide feedback to agents.

Chat Analytics: The analysis of chat transcripts or conversations between customers and chatbots or agents. AI-driven chat analytics can extract valuable insights, identify trends, and optimise chatbot performance in Contact Centres.

Omni-Channel Integration: The seamless integration of multiple communication channels (e.g., phone).



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