

# [Ch.4: decision support and artificial intelligence](https://assignbuster.com/ch4-decision-support-and-artificial-intelligence/)

Agent-based modelingway of simulating human organizations using multiple intelligent agents, each of which follows a set of simple rules and can adapt to changing conditions. Analytics (predictive analytics)uses a variety of decision tools and techniques-- such as neural networks, data mining, decision trees, and Bayesian networks-- to analyze current and historical data and make predictions about the likelihood of the occurrence of future events. Artificial intelligence(AI)the science of making machines imitate human thinking and behaviorBiomimicrylearning from ecosystems and adapting their characteristics to human and organizational situationsBuyer agent (shopping bot)an intelligent agent on a Web site that helps you, the customer, find the products and services you want. Choicethe third step in the decision-making process where you decide on a plan to address the problem or opportunity. Crossoverthe process within a genetic algorithm where portions of good outcomes are combined in the hope of creating an even better outcome. Data managementcomponent of a DSS that performs the function of storing and maintaining the information that you want your DSS to use. data-mining agentan intelligent agent that operates in a data warehouse discovering information. decision support system (DSS)a highly flexible and interactive IT system that is designed to support decision making when the problem is not structured. Designthe second step in the decision making process, where you consider possible ways of solving the problem, filling the need, or taking advantage of the opportunity. Expert system (knowledge-based system)an artificial intelligence system that applies reasoning capabilities to each a conclusion. Fuzzy logicmathematical method of handling imprecise or subjective information. Genetic algorithman artificial intelligence system that mimics the evolutionary, survival-of-the-fittest process to generate increasingly better solutions to a problem. Geographic information system (GIS)a decision support system designed specifically to analyze spatial information. Implementationthe final step in the decision-making process where you put your plan into action. Information agentintelligent agent that searches for information of some kind and brings it back. intelligencethe first step int he decision-making process where you find or recognize a problem, need or opportunity (also called the diagnostic phase of decision making)intelligent agentsoftware that assists you, or acts on your behalf, in performing repetitive computer-related tasks. location mashupa geographic information system (GIS) that displays a particular geopraohic area and then overlays content according to the user's desires. Mashupa combination of content from more than one source. Model managementcomponent of a DSS that consists of both the DSS models and the DSS model management system. Monitoring-and-surveillance agent (predictive agent)intelligent agent that constantly observes and reports on some entity of interest, that could, for example, be a network or manufacturing equipment. Multi-agent systemsystem in which groups of intelligent agents have the ability to work independently and interact with eachother. Mutationthe process within a genetic algorithm of randomly trying combinations and evaluating the success (or failure) of the outcomes. Neural network (artificial neural network, ANN)an artificial intelligence system that is capable of finding and differentiating patterns. Nonrecurring (ad hoc) decisionone that you make infrequently (perhaps only once) and you may even have different criteria for determining the best solution each time. Nonstructured decisiona decision for which there may be several " right" answers and there is no precise way to get a right answer. Predictive analyticsuses a variety of decision tools and techniques-- such as neural networks, data-mining, decision trees, and Bayesian networks-- to analyze current and historical data and make predictions about the likelihood of the occurrence of future events. recurring decisiona decision that you have to make repeatedly and often periodically, whether weekly, monthly, quarterly, or yearly. satisficingthe process of making a choice that meets your needs and is satisfactory, without necessarily being the best possible choice availableselectionthe process within a genetic algorithm that gives preference to better outcomes. structured decisiona decision where processing a certain kind of information ins specified way will always get you the right answer... Swarm (collective) intelligencecollective behavior of groups of simple agents that are capable of devising solutions to problems as they arise, eventually leading to coherent global patterns. user agent (personal agent)an intelligent agent that takes action on your behalf... User interface managementcomponent of a DSS that allows you to communicate with the DSS. ONCH. 4: DECISION SUPPORT AND ARTIFICIAL INTELLIGENCE SPECIFICALLY FOR YOUFOR ONLY$13. 90/PAGEOrder NowTags:

* Data warehouse