



LIBRARY DEVELOPMENT: TRADITIONAL TECHNIQUES TO ARTIFICIAL INTELLIGENCE TECHNIQUES

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Abstract: Artificial Intelligence Technologies are as essential tools for the perspective of library science services and their development and problems solving of Library Services. AI is platform between the problem and solving it, problem will be created, there will be problem in solution and hence AI's help will have to be taken. Adopting AI is the need of the future libraries. AI Robotic Technology can use for Library Services and the systems can be implemented in OPAC systems.

Keyword: AI Techniques are very useful to make the work easier for the human. Artificial Intelligence is as human beings, Cognitive Tasks, Perceiving Machines, Basic Machine for use with human & Automatic Machine with repeated one to many tasks, Artificial Intelligence for decision making. AI perfectly describes the five laws of library science.

Introduction: AI is the study of how to make computer program to things which at moment of human being do better, which is human intelligence. AI is relationship between data, information knowledge and intelligence. AI is one brain creates another or develops do it. AI is the study of how at any given time a human brain can perform better than human being and output could give. Human functionality in AI is fault, memory, human emotion. Human being input by seeing, hearing, smelling, touching etc. AI can data input, processing and output are there.

Methodology: Logical Artificial Intelligence, best solution is logic AI, Pattern Matching is Algorithm, Searching, Inference is one problem and many solutions and many problems to many solutions, Common search and reasoning, planning, problem solving, Ontology is real word entity with study of object, Heuristic is problem solve without use of algorithm, this is better path, Genetic representation is DNA Test finger print. Robotics is Development of Robot and robotics Techniques and Expert system is Particular problem with particular solving, speech reorganization. Jobs in big data, AI Machine learning, security management will increase due to impact of artificial intelligence. AI can be effectively in the Library Services. AI technology will have to be used, there should be a system on books to check location and details through AI tag, BAR code, RFID code, Magnetic code, chip system, etc., robotic technology will have to be brought for this, human beings have emotions, laziness, etc., Location of lakhs of books can be set in robotics, information about book search can also be displayed by going ahead of OPAC system. Robotics can also do issue, return, & reissue. Useful for handicapped, robot will come near for depositing books. Robot can scan library reference books and provide copies. Library Reference books should be in good condition & should be auto read by the machine. Readers should get the information they want.

Problem Solving Techniques: Use of knowledge box – How you use your knowledge to solve your problems is also called knowledge representation. Searching – Solving the problem by using best algorithm. Abstraction – Showing background details, giving the user only as much detail as they need and hiding the rest. State Space – Current position and conditions are initial state (problem), operations (States) and final state are all the operation states in the solution are called state space and called diagrammatic representation, state space representation. If we have a set of problems just as a set of solution, then it's called a system space. To solve any problem we have many solutions. When we solve any problem with the help of computer then we solve it with the algorithm approach. Whereas solve by human being always do that by following non algometric approach. Which called heuristic an algorithm? Problem characteristics: To solve any given problem, it is necessary to understand the problem systematically, this process are called problem characteristics. Is problem the compatible can the problem being decomposed? Divide the problem in sub-problems. 1. Is problem universal than if any universally accepted problem is to be solved then the algorithm and methods used to solve it must be universally accepted. 2. Can Solution be ignored than some of the solutions to the problem can be ignored?, For example, the solution to the mathematics rough work will be different. That pen work will be different. Moving from the solution to the problem is the goal solution available or not. For example – whether a problem gets a call state or not. The solution is inspired by the closest state and related output. The main state should be available. Is the problem to solution state is available or not. Whatever things are done to solve the problem. This Thing is called problem solution.

Conclusion: - Simulation in Machines of Human intelligence learning (big data and information), Analysis and reasoning (options, solution and decision), Self-correction (Feedback and Learning). Real time examples of AI: Virtual Assistant – SIRI – iPhone, Alexa for Amazon, Facial Recognition – Intelligence agency and police, Spam Detectors for Google AI Chatbot for ecommerce, Accurate for translating solution, Gaming, Self-driving car (Tesla-Google). Library Services can be specialized with AI. AI Techniques: How think ahead can one think to solve any problem? The mind uses searching abstract. Open AI –ChatGPT , DeepSeek-R1 is a free to use AI System. Use it for engaging conversations gain insight, automates tasks and witness the future of AI and all in one place. Performs reasoning tasks at the same level as OpenAI's is open for all research scholars.

References: <http://en.wikipedia.org>