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THE NEW AGE OF ARTIFICIAL INTELLIGENCE MONOTONIC MODELS AND USE OF GADGETS IN SMART LEARNING

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Abstract
How does the computer dreams by super intelligent artificial intelligence . Can the humans think of self-driving cars , Malware detection , Content Filtering , Search engines , sports , science and history by use of AI Monotonic sensing . The logic of sensing and gadgets that are close to human facts finding processes with thinking and learning from mono spatial environments is all becoming true for optimistic and pessimistic approaches by students in learning . The smart algorithms used by artificial intelligence in A Search , DFS Depth first search , Breadth search , beam search, fuzzy logic and use of heuristics in decision making for bringing the machines to logical interpretations for better conclusions as near to human simulations .The transformation of era of great growth in the computational and algorithmic power of AI computer architecture to finesse , effectiveness and understanding in AI with monotonic reasoning makes decisions more logical. Could the right AI model fix the challenges of AI to make sound decisions in critical moments , even when it doesn't have all the answers ? Such AI would be able to change the course of technology and enable the fairy -tale-like benefits of AI. The monotonic AI models are the answers to the ambiguities, anomalies for queries to un- certainties and problem solving in AI through XG Boost , Light GBM and TensorFlow Lattice.

INTRODUCTION

The monotonic models is an ML model that has some features of monotonic sensing whose increase always lead to increase in outputs.

The AI uses monotonic reasoning in abductive logic for deducing similarities and dissimilarities for applying knowledge base in expert systems for domain specific applications by the use of search strategies in Alpha-Beta prune , MNI-MAX Search , Branch and Bound search strategies . The expert applications with ML Algorithms of Supervised learning , Unsupervised learning , Reinforcement learning and assemble learning. **(GeeksforGeeks.org)**. The knowledge of declarative , procedural and experimental for searching the vast amount of data in global perspectives . The Computer can dream by use of super intelligent AI in searching alternatives , choices and navigating through problem space and solution space by smart algorithms . The super computational speeds in nano seconds can search the images , documents and files for maneuvering the problem space for possible solutions in AI by Alpha beta for searching the alternatives , branch and bound for closing the shortest search for unnecessary details .The minimax for optimal choice.

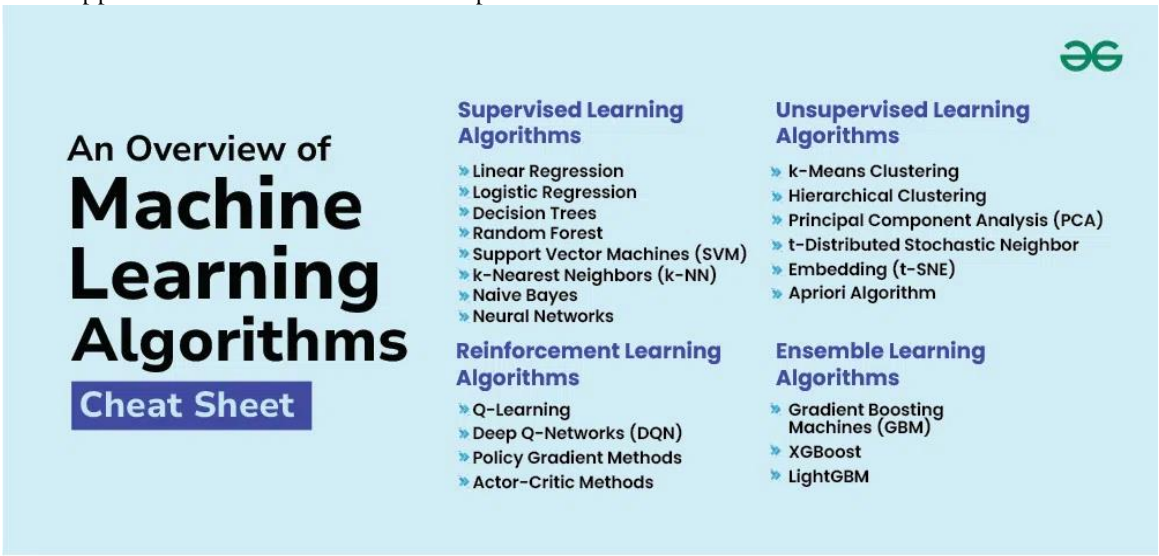
DISSCUSSIOIN

XG Boost is the boosting algorithm that takes the training data , uses it to train a model and then evaluates the model on new data. The process repeats until the model stops improving. (**www. Simple learn.com**) . The AI is using environmental cues like concepts of classes in C ++ programming in neural programming in NLP with logic of natural language closer to human language. The **blended learning** is using multiple platforms of online and F2F teaching. XG Boost is a supervised learning problems where we use the training data with multiple features x to predict a target variable y .(**XG Boost Documentation**). XG Boost is a scalable and highly accurate implementation of gradient boosting that pushes the limits of computing for boosted tree algorithms being built for open source software libraries.(**Navidia.com**).

The XG Boost will be implemented in **Distributed learning** in education by use of artificial intelligence for multi agents systems in knowledge of contents , cognition , procedures and methods . The F2F teaching , lectures , demonstrations , panel and group discussions in online environments for LMS , Content management systems , Internet training modules and web links for google directories . The distributed learning in artificial intelligence is a collaborative approach that uses data from multiple sources to train machine learning models. The distributed learning provides training , scalability and robustness by distributing workload across multiple machines . The information can be exchanged by user learning experiences and information to reach consensus. **(Wikipedia)**.

METHODOLOGY

The ML can be applied for **monotonic reasoning** which means it can move in one direction ie either increase or decrease but since monotonic reasoning depends on knowledge and facts ,it will only increase and will never decrease . It will work with specific type of models which has valid proofs and set of prepositions is always true. The **self driving car** is an example where the car saw green light it will increase speed but if pedestrians cross the road it will sense the image and stop. In **Malware detection Windows defender** monotonic AI models will defend the computer from damage through digitally coded trusted certificates. The web surfing monotonic AI model content filtering will weigh the appropriate features and separate the content from inappropriate as unacceptable . Similarly AI monotonic models will keep **email accounts** safe against phishing and filtering a or fool spam emails.



ENSEMBLE LEARNING MACHINE LANGUAGE ALGORITHMS

Machine learning Algorithms are a power tool for data analysis and predictions for used in combination with artificial intelligence for learning insights . Whether the data is labeled , unlabeled or dynamic data we can use the algorithms of artificial intelligence and machine learning as depicted above for online class

room activities in data depiction as YouTube videos , LinkedIn , design course curriculum , assignments and quizzes .

XG Boost stands for Extreme Gradient Boosting and is a machine learning library for GBDT gradient boosted decision tree was designed for distributed learning models for data predictions and statisticians use the teams in virtual environments for Kaggle structured data . The python and R Implementations of XG Boost have implementations for java , Scala , Perl and other languages The XG boost have been integrated with other tools and packages such as scikit -learn , caret for R users . XG Boost is integrated with distributed processing frame works like Apache Spark and Dask. XG Boost has benefits which include following

1 A large and growing data scientist use XG Boost for open source development learning and training modules.

2 XG Boost uses range of applications in regression , classification , ranking and user defined prediction challenges.

3 XG Boost library runs on OS X, Windows and Linux platforms.

4 Cloud integration that supports Azure , AWS , yarn clusters and other systems .

5 Active production use in multiple organizations across various vertical market areas.

6 A library that was built from the ground up to be efficient , flexible and portable.

LIGHT GBM is a gradient boosting framework similar to XG Boost that uses tree based learning algorithms . It is designed to be distributed and efficient making it suitable for large data sets .

TensorFlow Lattice is a library that implements flexible , controlled and interpretable lattice based models. The library enables to inject domain specific knowledge into the learning process. It uses monotonicity , convexity and pairwise trust (TensorFlow.org)

Supervised Learning models map inputs to outputs and explore data sets patterns learned in the past data on unseen data . Supervised models can use regression models of linear and tree -based models where we predict continuous variable like stock prices , learning outcomes of students , GPA calculation , performance and post course utilization.

Unsupervised Learning is the study of general patterns in data clusters or segments of users as we generalize the test on documents , companies and universities . The unsupervised learning consists of clustering models that group similar data points together or associated algorithms that group different data points based on pre defined rules.

Reinforcement Learning Algorithms use the principal of rewarding for good actions and penalizing for bad ones. The reinforcement theories of MacGregor are applied for linking performance with rewards.

CONCLUSION

The Artificial Intelligence with cognition , perception and reasoning on logic is nearing to human activities of reading , writing and speaking . The image and facial recognition systems have been introduced . The EDTECH industry is also using AI in data simulations and modelling for statistical and modelling analysis for computers to understand and reason the human logic with measurement . The machine learning is advancing in developing algorithms that enable the AI common sense and updating of tables and records in data bases for Q sort s , regression ,linear programming , decisions trees , mapping and sensing . The monotonic sensing has brought controllable and uncontrollable algorithms with deep embedded neural machine learning techniques . The banks are using AI for financial audits of its balance sheets and educational universities is using for pay roll , printing , student orders ,grading , counselling and narratives . The knowledge bases are linked with AI enabled software in domain specific expert systems to neural networks for corelating and assembling data with faster speeds like student e mail queries and discussion panels . The lectures are uploaded on user friendly multi medias and students are provided with web links for digital libraries , subject matter expert web sites for knowledge gaining and clarification of subjects syllabus.

The EDTECH student counselling services are using AI in shortlisting of CVs for matching Skills with test based systems and Job analysis . The manufacturing

sectors can use AI in design and analysis of spare parts in its robustness for failures and MTBF measures.
The businesses can benefit from projections , estimations and selecting business models of B2B , B2C. The markets can use **SBUs** strategic business units for product launching , growth ,decline to maturity phase . The health sector use AI in Brain cancer cells detection.

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