Concepts of Machine Learning

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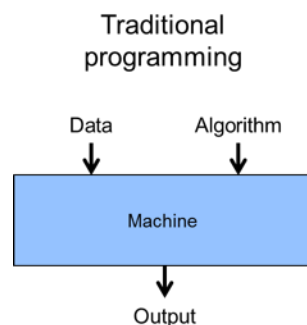
ABSTRACT

This paper is describe the overview of **"Machine Learning"** and its applications such as Web search, medical ,E-commerce ,space exploration etc ,and comparison of traditional programming and machine learning .students are learn about the machine learning uses in real world. It is also concerned with the reduce amount of complexity related to learning tasks.

Keywords: Machine Learning, programming, Algorithm

I. INTRODUCTION

1. MACHINE LEARNING

It is a study of different type of algorithms that improve their performance in some specific task by their own experience. These algorithms improve their performance by study of past data and task. We can say that A smart computer which learn from their own experience just like human beings which expert in their work by through their past experience.
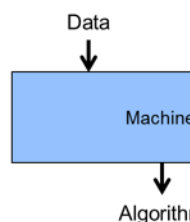

2. NEED OF MACHINE LEARNING

- Machine Learning is used to Make that type of Systems which are changed and customize their working according to the need of user.eg personal mailing ,and message filtering.
- It is help to discover knowledge from the data bases, so that the company can take new business idea and improve their performance. This concept is called the data mining.
- It help to make the system which are recognize the human being handwriting, speech and many more. for example unlock any system by matching password either it is in speech, characters ,numbers, biometric form.
- It development that system which requires more knowledge and skills to perform different task and adapt changes .for example in Artificial Intelligence.

3. ADVANTAGES OF MACHINE LEARNING

Data processing and real time predictions: In this the system consume more data and make predictions in different levels. For example in social website when customer add any product in their cart then website offers them discount and other gifts time to time.

Accept Data from different sources

It accept data from large number of sources in different forms because it is able to handle large data.so that it produce optimal output by analysis of data.

Provide multi-dimensional view of data: It provide the different view of data in different type of queries.

data is dynamic in nature so result is also change according to the need.

It is used in variety of applications such as banking and financial sector, healthcare, retail, publishing and social media, robot locomotion, game playing etc.

Make decisions: It help to make decisions based upon the analysis' of past data. For example A Soap company want to launch their new product in market, Machine learning help to know about their previous sale in old products so they can make the decisions whether their new product survive in market or not.

Flexibility: It can make changes in the system according to the need and environment changes.

4. APPLICATIONS OF MACHINE LEARNING

Web search: Machine learning is used in almost every part of the system at major search engines like Google or Bing,yahoo,facebook. Anything that requires some sort of "intelligence" is often solved using machine learning. It is learn from the queries of the users so they can satisfy the user from their services. Today intelligent search systems offers search by speech ,image and characters.

Medical: Machine learning is used in medical field, it is help to predict the health condition of patient by their past medical history in some decease.

It help the doctor how long patient is able to fight with some decease. Many applications of Machine learning in medical help in laboratory in blood testing ,tissues and many more. It help to maintain all important data regarding to the patient on daily base. Many systems are available in medical world which are using the machine learning to diagnose the patient's condition 24 hours in hospitals.

E-commerce: Many applications are launched now days to support the e-commerce , if it seems like every tech company is slinging around buzzwords like "big data," "artificial intelligence," and "machine learning," well, you're not wrong. The thing is e-commerce companies have a lot of data at their fingertips. But making use of that data is a challenge. Machine learning is able to make sense of digital data at a much faster rate than any human is capable of. Choosing the application of machine learning tends to be a decision of priorities. Sure, you could use machine learning to do a lot of things, but what will make the largest impact? In an ideal world, we could choose everything, let the machines take over, and relax. But this is woefully far from reality. Companies work with limited resources and need to prioritize what machine learning technology to adopt. It's safe to say that the priority would be the tech that makes the biggest impact. With this, let's review the most powerful applications of machine learning technology in e-commerce-commerce Applications advantages

✓ Personalization :by using this websites a customer can search their products by their choices.

✓ Pricing optimization: The different website offers different price on the products so that the customer can select the best product in best price.

✓ Fraud protection: the machine learning help to safe from any type of fraud make in transaction when customer can make the online payment.

✓ Search Ranking: Machine learning is set the search by keep track the customer interest area. So that it can offers the different information regarding their interest.

✓ Product recommendations :machine learning is help in product recommendations to the employee, so they can get the all rules, and also get the new trends according to the time.

✓ Customer support: machine learning have many applications which are used for customer support ,it help to take the queries from the customer in natural language and resolve the issues as soon as possible.

Space exploration: machine learning help NASA performing different tasks, many humanoid robot are available to work with astronauts on the other planets in dangerous environment and help to different experiments. Many space agencies have lot of data

with related to the space exploration, which is very large and complex ,so machine learning is help in analysis of that type of data. These data related to the science problems so which used in mission goal.

Robotics: Machine Learning is also used in Robotics field, because the humanoid Robotics are perform the different and new tasks by experience of last work ,so that these are adapt the new tasks.

Information extraction: Machine Learning concept is very useful in Information extraction ,that is in large number of data ware houses have historical data ,on based upon Machine Learning techniques it help to extract the useful information ,so that any organization get the idea about their performance ,and take new steps to increase it.

Debugging: Machine Learning is more effective in Debugging also, the machine Learning algorithm is provide the systematically approach in debugging because it is help to improve the debugging producer, by the experience of algorithms it is help to achieve the best result in debugging ,which mostly helpful in development stage of software's.

II. CONCLUSION

Machine Learning not only use in E-commerce, web search but also used in data mining concept where only the useful information is extract from the database so that any decision maker can make the different of decisions. The students are learn about the machine learning algorithms how these are work , and how to perform the different type of task from their past experience.

III. REFERENCES

[1]. Riyaj Shaikh (2010). What machine learning work done in software debugging?

[2]. Emir Lejlic (2012). "The Machine Learning". Accesses from /https://www.lumagate.com/news/the-advantages-of-machine-learning.

[3]. Narges Razavian (2014). Applications of Machine Learning in Computational Biology. New York University. http://people.csail.mit.edu/dsontag/courses/ml13/slides/lecture26.pdf

[4]. Lacie Larschan (2015). Powerful Applications of Machine Learning in E-Commerce. Accessed from /https://www.granify.com/blog/powerful-applications-of-machine-learning-in-e-commerce