LITERATURE SURVEY

Tom Mitchell states machine leaming as "A computer program is said to learn from experience and from some tasks and some performance on, as measured by, improves experience" Machine Learning is combination of correlations and relationships, most machine learning algorithms in existence are concerned with finding and be exploiting relationship between datasets. Once Machine Leaming Algorithms can pinpoint on certain correlations, the model can either use these relationships to predict future observations or generalize the data to reveal interesting patterns. In Machine Learning there are various types of algorithms such as Regression, Linear Regression, Logistic Regression, Naive Bayes Classifier, Bayes theorem. KNN (K-Nearest Neighbour Classifier), Decision Tress. Entropy, ID3. SVM (Support Vector Machines), K means Algorithm, Random Forest and etc.. The name machine learning was coined in 1959 by Arthur Samuel. Machine learning explores the study and construction of algorithms that can learn from and make predictions on data Machine learning is closely related to (and often overlaps with computational statistics, which also focuses on prediction making through the use of computers. It has strong ties to mathematical optimization, which delivers methods, theory and application domains to the field. Machine learning is sometimes conflated with data mining, where the later subfield focuses more on exploratory data analyses and us kawa as unsupervised learning

Within the field of data analytics, machine learning is a method used to devise complex models and

algorithms that lend themselves to prediction; in commercial use, this is known as

predictive analytics. These models allow researchers, data scientists, engineers, and

analysts to "produce reliable, repeatable decisions and results" and uncover "hidden insight"

through learning from historical relationships and trends in the data.

# HISTORY OF MACHINE LEARNING

* 1950 this is the year when Alan Turing, one of the most brilliant and influential British mathematicians and computer science, created the Turing test. The test was designed to determine whether a computer has human-like intelligence in order to pass the test, the computer needs to be able to convince a human to believe that it's another human.
* 1952-Arthur Samuels, the American pioneer in the field of artificial intelligence and computer gaming, wrote the very first computer learning program, That program was actually the game of checkers. The IBM computer would first study which moves lead in winning and then put them into its program
* 1957-This year witnessed the design of the very first neural network for computers called the percepron by Frank Rosenblan. It successfully stimulated the thought processes of the human brain.
* 1967- The nearest neighbor algorithms was written for the first time this year. It allows computers to start using basic pattern recognition. This algorithm can be used to map a route for a traveling salesman that starts in a random city and ensures that the salesman passes by all the required cities in the shortest time Today, the nearest neighbour algorithm called KNN is mostly used to classify a data point on the basis of how their neighbours are classified, KNN is used in retail applications that recognize patterns in credit card usage or for theft prevention when implemented in CCTV image recognition in retail stores.
* 1981 Gerald Dejong introduced the concept of explanation-based learning (EHL) in this type of learning, the computer analyzes training that and generates a general rule that it can follow by discarding the data that doesn't seem to be important 1985 Terry Sejnowski invented the Net Talk program that could learn to pronounce words just like a baby does during the process of language acquisition.

EXISTING SOLUTIONS

* Clinical decisions are often made based on doctors' intuition and experience rather than on the knowledge rich data hidden in the database.
* This practice leads to unwanted biases, errors and excessive medical costs which affects the quality of service provided to patients.
* There are many ways that a medical misdiagnosis can present itself. Whether a doctor is at fault, or hospital staff, a misdiagnosis of a serious illness can have very extreme and harmful effects.
* The National Patient Safety Foundation cites that 42% of medical patients feel they have had

back seat for other concerns, such as the cost of medical tests, drugs, and operations.

Medical Misdiagnoses are a serious risk to our healthcare profession.

PROPOSED SYSTEM

• This practice leads to unwanted biases, errors and excessive medical costs which affects the quality of service provided to patients.

This suggestion is promising as data modelling and analysis tools, e.g., data mining, have the potential to generate a knowledge-rich environment which can help to significantly improve the quality of clinical decisions. The main objective of this research is to develop a prototype Intelligent disease Prediction System(IHDPS) using three data mining modelling techniques, namely. Decision Trees, Naïve Bayes and Neural Network. So its providing effective treatments, it also helps to reduce treatment costs. To enhance visualization

USE CASE DIAGRAM

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