

Mishmash of Fissure Psychoanalysis of Data Classification in Contact Lenses Wearing

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Abstract

Wearing Contact lens is the current trends towards this age band. A quantity of set of cluster people wears it for vision problem and others to showcase them in a pleasant behavior and so on, based on the trends, it is applied by some cluster of people, at any cost of the source, and it can be moved into a market as make-upping product. Physically speaking wearing contact lens for vision problem, it takes some fissure to analysis to get a comfort zone for each and every applier on eye. Ophthalmologists will be taking responsible to check the vision capability and help us to wear the lens. In case, when the issues arises to the person with T2D (Type 2 Diabetes), acquiring the needs to satisfied in prefect way by applying the Classification technique. Decision trees is trained based on the genes, age, parameter values like blood sugar level, status of diabetes retinopathy, compatible lens to support the visualization belongings.

I. INRODUCTION

Research Entitled [16] as “Research on Data Mining Classification” is reported by Rikita M.Tech student from Eternal University. The algorithm implements towards the

research are to find the request and response from the blood donor details. Techniques used based on the data mining are neural networks, genetic algorithm, decision trees and statistical methods. The main idea for the development of the research is to help the person who works in multiple work nature of environments. Approaches applied in this research are implemented by comparing the training set with the prediction set values. Conjunction keys like (and, or, like, between) are implemented to focus the input and output values to obtain the resultset as per the user needs. "classification discovery Model" is implemented using the classification tree and Regression tree. Neural networks techniques are defined and explained in general, but not much better than the classification discovery models. Genetic Programming is used to analyze the common optimal levels of the supervised learning methods. Statistical algorithms like ID3 and C4.5 is used applied to categories the value either true or false state.

Multiple Class variables dependence is viewed clearly to identify the result set using this methodology. Research gets to conclude to have a try based on the algorithms in all data mining techniques as (trial and error) methods and not so specific in any one. Resultant values of the paper provide 80% of the outcomes. Even though this research achieves the average rate, it provides wastage of time. A proper data analyst is required to fine the large dataset in simplest value. Paper entitled [6] as "An Efficient Classification Approach for Data Mining" presented by the authors are Hem Jyotsana Parashar, Singh Vijendra, and Nisha Vasudeva. Authors in this research paper are implemented an efficient algorithm towards classification in data mining using Decision trees, C4.5 and ID5 etc.

Proposed methods implemented provide nearly 100% of the result, but the entropy may be good or bad outcomes. Researchers specify the type of application introduced is java Swing or applied in their testing. Classification of data happens as a trial and error methods. As an initial stage the data related to the research are grouped together as per the research requirement as approximately, then classification/misclassification of the data attributes are applied to evaluate the result set in an defined manner as clearly. In this point of view, researcher tried multiple trials to sustain the data attributes related to their features. Iris dataset is implemented in the low level of memory space. Research gets to conclude entropy may be differs for different dataset. Classification of data attributes related to their research is accurately defined and implemented. Decision trees are applied to find an exact value as an outcomes, there may be some distraction happed due to the different types of dataset applied.

Research Entitled [17] as "Diabetes Mellitus" is developed by Samreen Riaz in Scientific Research and Essay. The detailed analysis of the research based on diabetes is mandatory. Even though diabetes is not disease affected to the human, but it does not supports or help the boost up the human body when the cell are damaged. Research presented "Diabetes Mellitus" defines in the research point of view based on the causes, sign and treatment related to diabetes types. Diabetes test can be carries before and after

fasting of the food, Random Glucose sugar test, Fasting plasma glucose test. Insulin is mainly required to the human body. Diabetes types are tabulated as follows:

Table 1: List of Diabetes Types with Range

Type	Age	Range	Diabetes Types
Type 1	Less than 20	110-125 mg/dl	Type 1
Type 2	Greater than 20	>126 mg/dl	Type 2
Type 3	Any age factor	110-125 mg/dl	Pre-diabetes
Type 4	Pregnant Women or child	>126 mg/dl	Gestational Diabetes

Research process does not gets implemented in any application as of it is developed by the Department of Microbiology and Molecular Genetics. Diabetes related queries can be easily clarified when reading happen to this paper. Mutually tried to explain the risk factors as well as the treatment methods towards diabetes are stated. At last Prevention regarding to the diabetes is stated to each and every types of diabetes. Drugs prescribed list also stated clearly. To conclude the research, “Diabetes Mellitus” gives the basic Knowledge about the main requirements.

Research Entitled [2] as ”Diagnosis of Diabetic Retinopathy” gives an details over view about diabetes and supports to identified by some symptoms and checking the blood sugar level test. Eye vision is the main and important to the entire human, if the diabetes patient does not maintain the insulin level, it will automatically affected the retinal blood vessel.

Types of Retinopathy in diabetes are stated as follows:

1. Non-proliferative diabetic retinopathy (NPDR):
 - i. Affects to have damage in retina blood vessels
2. Proliferative diabetic retinopathy (PDR):
 - i. Affects to have leakage of blood vessels.

Determination of Diabetes Retinopathy based on the development of expansion of

- ✓ Microaneurysms (swelling in the venous),
- ✓ Exudates (lipids leaks appears in yellow lesions)
- ✓ Hemorrhages (small red spots).

If the disease spread over from retina to macula, it may cause total blind loss. Morphological image processing technique is used in this research to find out the preprocessing towards the fundus retinal image of the eye. Methodologies used in this research are preprocessing, optic disk detection, blood vessel extraction, exudates detection. Paper Entitled [4] as “Diabetes and contact lens wear” describes effusively about the facts of contact lens wearing to the diabetes patients based on the refractive correction. Even though many surveys are described about the issues regarding the contact lens, this research particularly gives an appropriate solution based on the tear collections on eye. The main idea and purpose is to review of anterior ocular manifestations of diabetes are maintained their diabetes metabolic control, when the frustration happens on contact lens wearing. The various factor analysis in anterior ocular variation in diabetes are tear film, Orbit, Eyelids, conjunctiva. Tear film will be

susceptible based on TBUT [Tear breakup time] either it may be shorter or reduced. Proliferative diabetic retinopathy patients will have decreased tear film. Orbit is a parameter, which is identified based on fatal fungal infections on eye.

Eyelids will show as early stage symptoms, as like measures of yellow collection will be appeared. Conjunctiva is a later stage of symptoms for diabetes patients, where oxygen tension will be affected at the sleep time to the retina changes on eye. Survival of data has been applied equally to diabetic patients and non-diabetes patients based on the age factors and diabetes affected stage. Certain concerned of diabetes patients who affected serve can apply the soft contact lens based on the oxygen tension rate on their eye. After providing the risk factors and follow up education about the contact lens, there is no contrivance about the ocular variation based on refractive correction on eye for diabetes patients.

II. PROBLEM DESCRIPTION

Problem can be stated as a main focal point to demonstrate the research question in an ideal way. Research applied will depend of the state of affairs or nature of the cause. Problem statement is categories into three stage of analysis to predict and evaluate the comfort zone of the human. Leading human life without any cause of medical issues or concerns is a challenging environment in this day and age. If so, any issues occur towards the challenging champion, that has a chain poll or loops between the medical environment belongings. Surrounding loop holes has to be studied fully, to protect the challenging champion. Loop holes dependences in medical concerns have to be wired up, until the cause and sign of the medical features are educated to the unknown Challenging champion. Problem statement is illustrated to prevent the human vision by applying some research process in the related extents followed by research query gathered.

III. SYSTEM METHODOLOGY

The Key leeway of the research is to provide a quick decision repository. i.e., to find out the comfortable zone of wearing Contact lens when the person is affected either by diabetes or with diabetes retinopathy. Each and every category of factors are identified by the symptoms and based on the parameters specified. Classification is applied to provide a decision trees through multiple parameters in three different and sub-related areas. Main planned system to the audience is the user agent, whose needs to give suggestion for the person who wear the contact lens. Scope of the work started from the basic search to understand what is diabetes and it grown the next level as like classification in data mining. Existing approaches are mostly done the medical concern only, which supports for their survivals only in any one of the particular stage as described below. The proposed works are intervened into 3 stages:

Stage 1: Identify the diabetes type based the age factor with blood sugar level

Stage 2: Identify either the patients is affected by diabetes retinopathy or not.

Stage 3: Identify the type of contact lens which will be comfortable for wearing, when the person is affected with Type 2 diabetes and affected with diabetes Retinopathy.

IV. IMPLEMENTATION RESULTS

Research Methodology implies to describe about the different utilities /techniques applied in the research to get the better resultant value based on the central tendency achieved. Methodology used in this research is fully based on the domain data mining. To analyze the data based on the survival implemented in the domain factors to attain the working hypothesis, will supports to attain the result as determined. Techniques used to observe the research are implemented based on the three techniques. They are

- ✓ Stage-1: Twofold Category Classification Technique
- ✓ Stage-2: Mutual Image Evaluation in DR Pattern Clustering Techniques
- ✓ Stage-3: Manifold Data Acquisition on Contact Lens classification Techniques.

All those techniques are implemented as forward process to find out the comfort zone in all the factors. Techniques implemented will provide a good result in all environments.

Stage-1 Analysis will be implemented with the features as “Twofold category classification Technique”. In these techniques, age is categories into three levels as young, pre-presbyopic, presbyopic. And the value of blood sugar level is depends upon Fasting Plasma Glucose Level. This techniques supports to identify the type of diabetes affected as a consequence assessment. Stage-2 Analysis will be implemented with the features as “Mutual image evaluation in DR Pattern Clustering Techniques”. As a First step, symptoms related to Diabetes Retinopathy (DR) are identified either as early or later. Evaluation Process based on image is applied with common settings in both trained and tested images like sizing, clarity, location, etc. Techniques is applied to identify either the patients is affected with Diabetes Retinopathy or not. Equally stranded (cut off) to initiate the result value based on the assessment applied will provide to cluster the numbers centered on the parameters specified. Stage-3 Analysis will be implemented with the features as “Manifold data Acquisition on Contact Lens classification Techniques”. The accentuate data will be supports to the next level of integration, to identify the type of contact lens, which will provide comfort zone of eye. The main factors dependency of classification follows based on the diabetes type. Exactly, the research focuses on Type2 diabetes. Contact Lens Parameters symptoms are identified related to eye parts are Orbit, Eyelids, Tear Film and Iris. Classification of data will be required based on the vision problem. The Proposed techniques will support to identify the suitable type of contact lens to wear, without any side-effects affects to the human eye. Results applied are supports to provide a good accuracy and fast execution time process, when implemented in classification and Grouping algorithms. Accuracy Calculated as per the true positive and true negative value with false factors also. Results evaluated based on the stages as reported in the below table.

Table 2: Psychoanalysis on Accuracy and Execution Time

Implementation Stage	Accuracy	Execution time in seconds
Stage 1	89	1.05
Stage 2	87	4.34
Stage 3	92	2.5

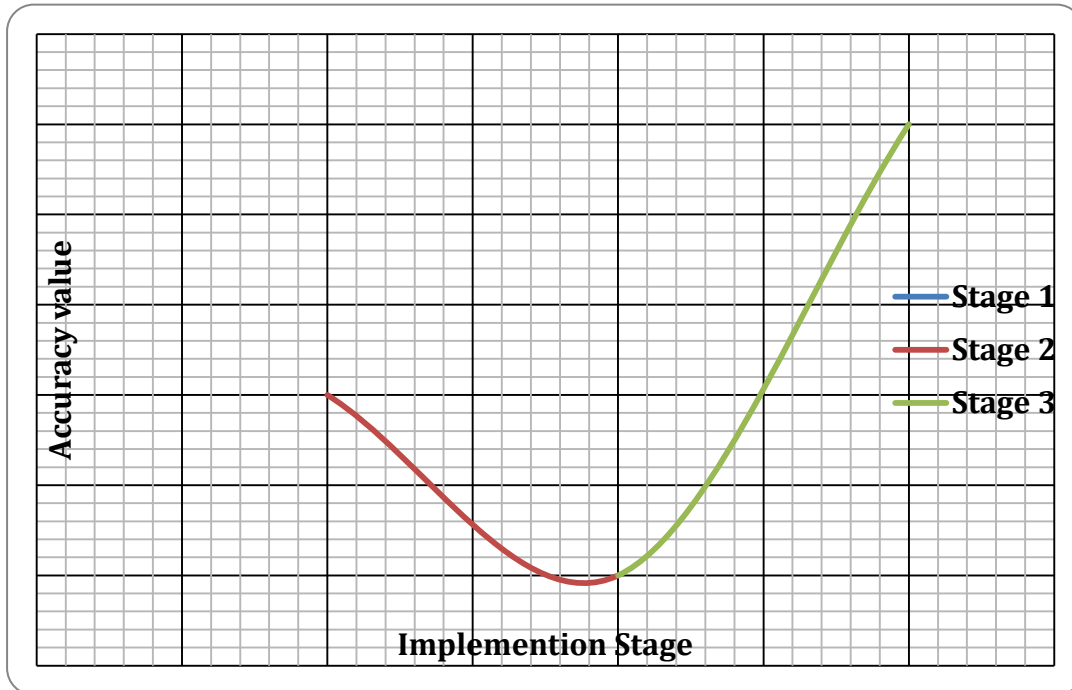


Figure 1: Execution Accuracy Results

V. CONCLUSION

Data Acquisition gathered towards the explanatory research supports to give a quick decision repository. Even though diabetes is not a disease, but it supports as a distribution on other medical issues. Protecting diabetes, by identify the symptoms in early or later stage are educated through this application. The survival shows that Diabetes is highly affected to the group of the people in presbyopic stage. Type 2 Diabetes is identified often, when the tested are taken over through fasting Glucose plasma test. Due to the Shorter Tear Film, Diabetes Retinopathy patients are suggested to wear Contact lens as either soft lens or spectacles with ultimately following up with handling futures with care.

Pre-diabetes are identified as one-third from the survival, and affected highly in the age band of pre-presbyopic. Prevention is better to cure them easily by maintaining the insulin level properly and by providing the sufficient Knowledge to educate the symptom identification in early stage. Type 1 diabetes is the next step level, which is highly affected to age band of young people. Youth can tolerate the range based on their health dependency, at some factor need to educate about the routine exercise and proper diet plan is required for them.

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