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| **PROPOSAL ON AN EXPERT SYSTEM FOR DIAGNOSING EYE DISEASES** |
| Artificial Intelligent |

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## AN EXPERT SYSTEM FOR DIAGNOSING EYE DISEASES

# Introduction

Computer-based methods are increasingly used to improve the quality of medical services in supporting doctors and patients. As we know Artificial Intelligence (AI) is the area of computer science focusing on creating machines that can engage on behaviors that humans consider intelligent. Dependence on the human expert can be minimized if his/her expertise can be transferred into a computer system. Considering the current situation in Ethiopia we proposed a **system for Diagnosing Eye Disease**.

The proposed system for dealing with the problem of eye disease diagnosis is an expert system. An expert system is a system that employs human knowledge captured in a computer to solve problems that ordinarily require human expertise. Expert system seeks and utilizes relevant information from their human users and from available knowledge bases in order to make recommendations. With the expert system, the user can interact with a computer to solve a certain problem. This can occur because the expert system can store heuristic knowledge.

# Objective

The objectives of our expert system is

* To assist Ophthalmologists (specialist in medical and surgical eye problems since Ophthalmologists perform operations on eyes, they are considered to be both [surgical](http://en.wikipedia.org/wiki/Surgery) and [medical](http://en.wikipedia.org/wiki/Medicine) specialists) on their day to day operation.
* To create cost effective way of Diagnosing Eye Disease without the need of actual expert using computers.
* By Applying the knowledge of Artificial intelligent in to maximize the result of the diagnosis , the system try to improve the accuracy of results

# Statement of the problem

The application of expert systems in medicine is very interesting and has created considerable importance systems of diagnosis. Here we try to solve the problem of the expensive cost of Eye diagnosis by partially through time completely replacing the actual Ophthalmologist experts by computers programs.

# Scope

The proposed system will perform many functions. It will conclude the eye disease diagnosis based on answers of the user to specific question that the system asks the user just like the human Ophthalmologist ask their patient. The questions provided by the system for explanation for the symptoms of the patient that helps the expert system for diagnosis. The disease it stores the facts and the conclusion of the inference of the system, and the user, for each case, in data base. It processes the data base in order to extract rules, which complete the knowledge base.

The diagnoses done by the system mainly include

* Short sightedness
* Long sightedness
* Color blondness
* Bacterial infections

The expert system also collects results of actual diagnosis by Ophthalmologist in order to learn and build experience. Since our system can’t replace the human Ophthalmologist 100%, the results found by the expert system and suggestions will not be perfect.

# Conclusion

The application of expert systems in medicine is very interesting and has created considerable importance systems of diagnosis. The proposed system can help doctors and patients in providing decision support system, interactive training tool and expert advice.