Template

# Deep Learning Model For Eye Disease Prediction

An AI Doctor

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XPLANE®

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# Deep Learning Model For Eye Disease Prediction

In this project, we are categorizing different kinds of ocular diseases that individuals can develop for a variety of reasons, such as age, diabetes, etc. The four main groups into which these disorders fall are Normal, Diabetic Retinopathy, Cataract, and Glaucoma. In artificial intelligence (AI), deep learning (DL) techniques are key components of high-performance classifiers used in the image-based diagnosis of eye diseases. One of the most widely used methods that has improved performance in many domains, particularly image analysis and classification, is transfer learning. We employed transfer learning approaches like as Inception V3, VGG19, and Xception V3, which are more popular and very successful in the field of image analysis.

**WHO are we empathizing with?**

Who is the person we want to understand?
What is the situation they are in?
What is their role in the situation?

People who are concerned that they may have an eye disease, but do not have access to a doctor or eye doctor. People who live in remote areas or have difficulty traveling. People who cannot afford to see a doctor.

Researchers who want to use the web application to collect data on eye diseases and develop new treatments and prevention strategies.

Doctors who want to use the web application to educate their patients about eye diseases and prevention.

**GOAL**

The web application should provide clear instructions on how to upload an image of an eye. The image should be of high quality and well-lit.

**What do they need to DO?**

What do they need to do differently?
What job(s) do they want or need to get done?
What decision(s) do they need to make?
How will we know they were successful?

The results should include the predicted eye disease, the confidence score of the prediction, and any recommendations for further action.

The web application should provide support for users who need help using it. This could be done through a FAQ page, a live chat feature, or a customer support email address.

Links to additional information about the predicted eye disease, such as symptoms, causes, and treatments.

A page with the results of the prediction, including the predicted eye disease, the confidence score of the prediction, and any recommendations for further action.

A page where users can upload an image of their eye and select a few options about their eye health, such as their age, gender, and medical history.

**What do they HEAR?**

What are they hearing others say?
What are they hearing from friends?
What are they hearing from colleagues?
What are they hearing second-hand?

It is important to note that the eye disease prediction web application is not a substitute for professional medical advice. If users have any concerns about their eye health, they should consult with a doctor or other eye care professional.

**What do they THINK and FEEL?**

**PAINS**

What are their fears, frustrations, and anxieties?

>Uncertainty about the accuracy of the prediction
>Difficulty using the web application

>Lack of understanding about eye diseases and prevention
>Difficulty accessing healthcare

**GAINS**

What are their wants, needs, hopes, and dreams?

Reduced anxiety, improved understanding of eye diseases and prevention, increased access to healthcare, and improved quality of life.

A user who is at risk for vision loss may be able to prevent vision loss by following the recommendations on the web application.

What other thoughts and feelings might influence their behavior?

We can also provide links to independent studies that have evaluated the accuracy of the model.

we can develop a mobile version of the web application or make the web application accessible through other devices, such as smart TVs or game consoles.

We can also allow users to save their results so that they can come back to them later.

**What do they SEE?**

What do they see in the marketplace?
What do they see in their immediate environment?
What do they see others saying and doing?
What are they watching and reading?

**What do they SAY?**

What have we heard them say?
What can we magine them saying?

I'm going to upload an image of my eye to see if the web application can predict if I have glaucoma.

The web application predicted that I have a 50% chance of having cataracts. I'm going to show the results to my doctor.

Receive feedback from the user that he has tried and got the good accuracy that it is suitable to use

Users are reporting that the application is easy to use, accurate, and helpful. However, there are also some concerns about the reliability of the application, as it is still under development.

**What do they DO?**

What do they do today?
What behavior have we observed?
What can we imagine them doing?

users can click on the "Upload Image" button and select an image of their eye from their computer. The image should be in a common image format, such as JPG or PNG.

**View the results of the prediction:** web application will process it and display the results of the prediction. The results will include the predicted eye disease, the confidence score of the prediction

**Share the results with their doctor:** This could be done by generating a PDF report, sending an email, or connecting to a third-party medical record system.

users can click on the "Learn More" button and visit the educational resources section of the website. This section will include articles, videos, and interactive quizzes about eye diseases and prevention.

Users can provide feedback on the web application by clicking on the "Feedback" button and submitting a form. This feedback will be used to improve the web application and make it more user-friendly.