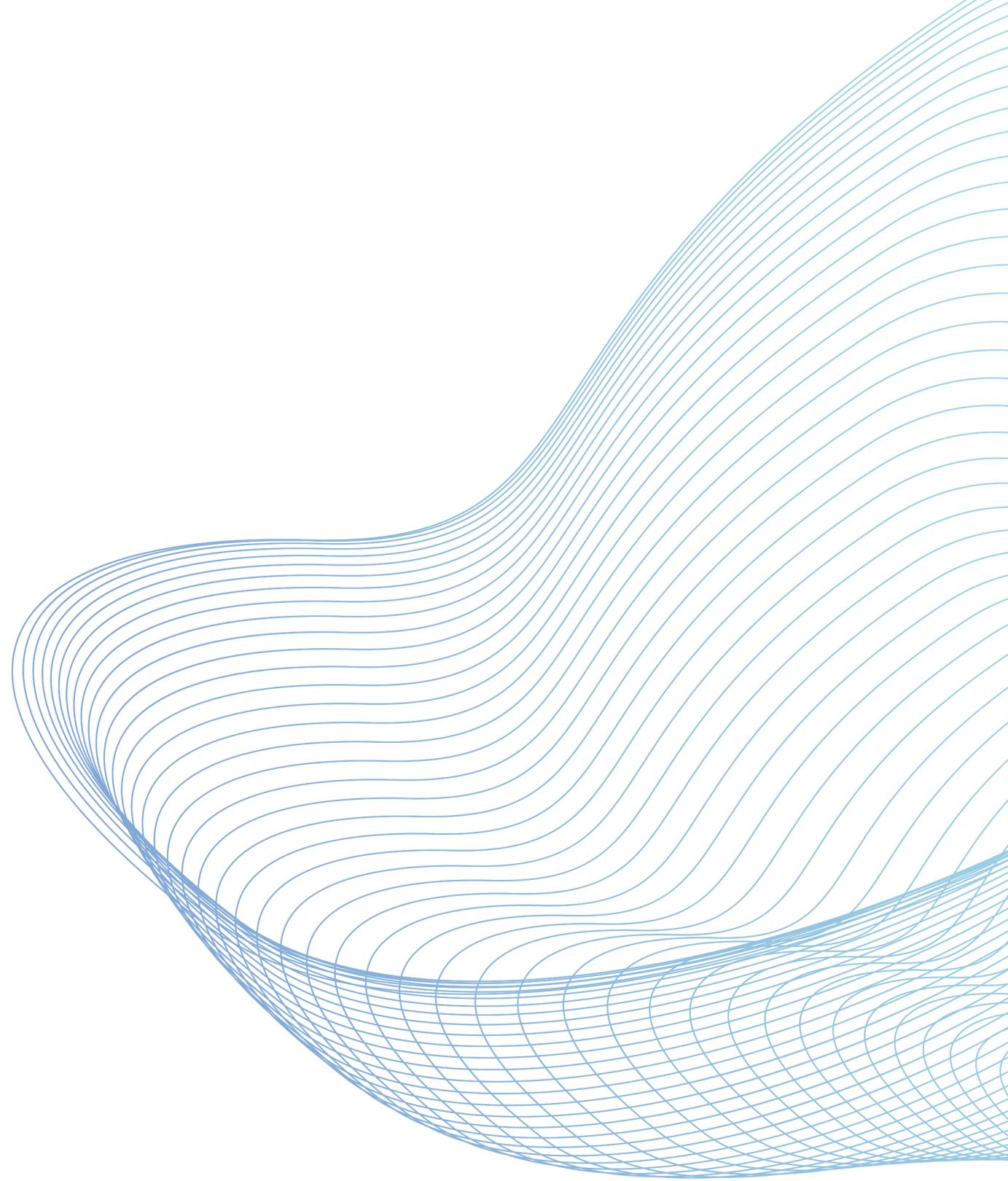


PREDICTING THE RISK OF MACULAR EDEMA BY USING CNN



TEAM MEMBERS

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INTRODUCTION

This project aims to develop a machine learning model that utilizes Convolutional Neural Networks (CNNs) for accurate and early prediction of the risk of macular edema in patients. Macular edema is a critical complication of various eye conditions, including diabetic retinopathy, and early detection is crucial to prevent vision loss. This project leverages CNN-based image classification to analyze retinal images and assess the likelihood of macular edema.



ABOUT THE DATASET

The dataset we used in this project was extracted from IEEE.

This dataset consists of :

1. Original color fundus images (516 images divided into train set (413 images) and test set (103 images) - JPG Files)
2. Groundtruth Labels for Diabetic Retinopathy and Diabetic Macular Edema Severity Grade (Divided into train and test set - CSV File)

The three classes of the target column represent:

- Class Label 0 indicates No risk of Macular Edema
- Class Label 1 indicates Moderate risk of Macular Edema
- Class Label 2 indicates High risk of Macular Edema

SCOPE

Predicting the risk of macular edema is significant and can positively impact both healthcare and medical research. The scope of a project like this is complex and interdisciplinary, involving expertise in deep learning, medical imaging, healthcare, ethics, and regulatory compliance.

Successful implementation can significantly improve the diagnosis and management of macular edema, potentially enhancing patient outcomes and reducing the burden on healthcare systems.

THANK YOU!