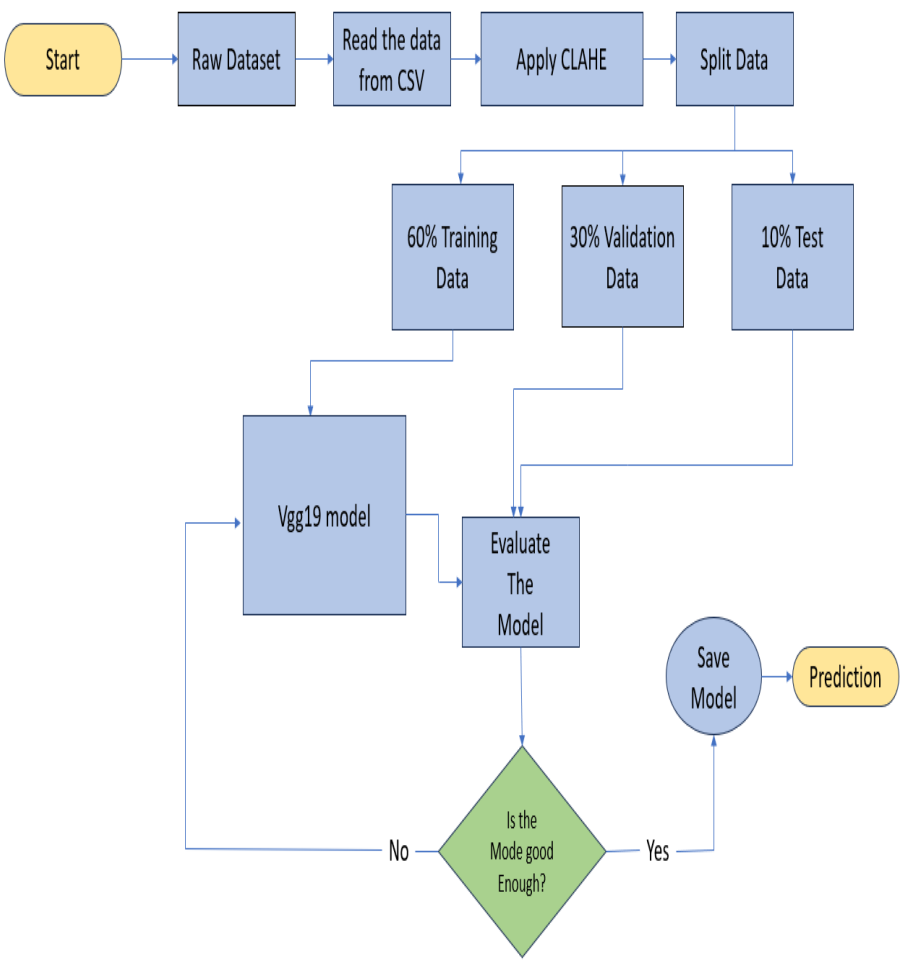
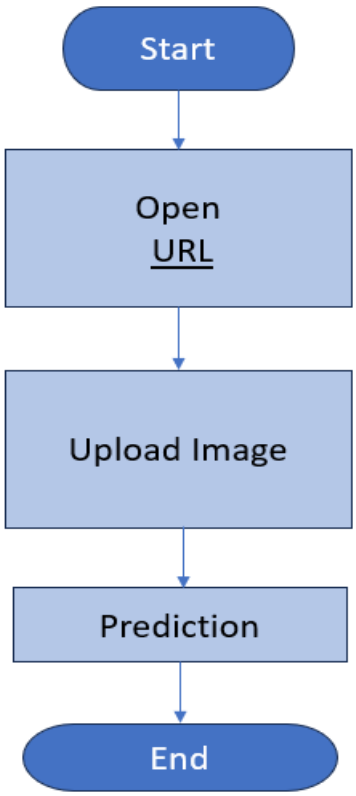
Post Graduate Diploma in Big Data Analytics (PGDBDA)

March 2023 Batch

Group Number	Group - 02
Guide	Dr. Priyanka Jain (AD, CDAC Delhi) Mr. Anurag Singh (Project Engineer)
Group Members	1. Rajesh Rane 2. Akshay Hanumante 3. Swapnil Randive
Project Title	Capturing Insights: Developing an Advanced Fundus Camera for Ocular Health Assessment
Abstract	•Ocular health assessment is a critical component of preventive care. However, traditional methods of ocular health assessment, such as manual grading of fundus images, can be time-consuming and prone to errors.

	•Machine learning (ML) has the potential to automate ocular health assessment and improve its accuracy. •This study proposes the development of an ML model for ocular health assessment using an advanced fundus camera. •The model will be trained on a dataset of fundus images with ground truth labels for various ocular health conditions. The model could also be used to improve the accuracy of ocular health assessment, which could lead to earlier detection and treatment of eye diseases.

Project Flowchart	

	
Scope Of Project	•Developing a model that can detect a wider range of eye diseases •Developing a model that is more user-friendly
Technologies used	• Flask API for Frontend • VGG19 pretrained model • Keres • TensorFlow

Application	• Telemedicine: Advanced fundus cameras can be used for telemedicine, which is the delivery of health care services remotely. This can make it easier for people in rural or remote areas to access eye care services. • Research: Advanced fundus cameras can be used for research into eye diseases. This can help to improve our understanding of these diseases and to develop new treatments.
Project Timelines (Total:120 hours)	Group form: 26 June Project title justification: 15 Aug Abstract: 16 Aug Discussed dataset within team: 18 Aug Started working on backend: 21 Aug Started working on flask web application:27 Aug Code Integration done 31 Aug