

Follow below instructions to run the code and successfully execute the program. First, we generate the eye disease detection model using our deep-learning model. Graphical User Interface is prepared once the model is developed.

1. Input dataset is obtained by unzipping the file - "Eye Disease Dataset".
2. A Jupyter Source File named - "Deep Learning Model Development Code" contains the code for developing an eye detection model.
 - a. Open this code either in local (jupyter notebook) or on web (kaggle).
 - b. Add the input dataset obtained above in the input field in the jupyter notebook.
 - c. Install all the dependencies as given in the code.
 - d. Run the complete code till the end. The output generated is the eye detection model and it is saved in the output folder.
3. Another zip file named - "Graphical User Interface Code" is present. Unzip this file.
 - a. Open the unzipped folder.
 - b. Open this folder in Visual Studio Code (or any other code editor).
 - c. Three folders are present in this folder.
 - d. Go to the - "backend" folder in the terminal.
 - i. In this "backend" folder, copy the model that was obtained as output from Step 1. (In our folder, the model that we used is already included named - "conv2d_6-Eye_Disease-95.30.h5").
 - ii. Install all the dependencies in this folder. To do this, in terminal, run the code - `pip install -r requirements.txt`
 - iii. To run the backend server, run the file - "`main.py`".
 - e. Go to the - "frontend" folder in the terminal.
 - i. Install all the dependencies in this folder. To do this, in terminal, run the code - `npm install`
 - ii. To run frontend react server, in terminal , run the command - `npm start`
 - f. Using the above steps, the graphical interface will start running on the browser.
 - g. Test the graphical interface by uploading any eye fundus image in the interface, to get its expected disease prediction and respective confidence percentage.
4. Expected output is successfully obtained upon completion of above steps.
5. Four other PDF files are also present in the main folder. They are report, report latex code, report plagiarism and an IEEE conference paper on our research work.