



BLINKEYE

Team Members

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Description

- Our project focuses on the eye health and the performance analysis of the student or any corporate workers.
- First , we are counting the blinks per minute of user and will show the blink per minute chart, if he is blinking frequently to keep his eye healthy.
- We are also keeping a record of our facetime to get the knowledge about his concentration while facing the screen.

Achievement

- Our project can help student community to take care of their eyes and plan accordingly to study and increase his/her performance.
- Students or corporate workers can also analyze their screen facing concentration to get his performance analysis during the whole day.

Possible future work

- Enhancing the performance of model
- Recommendation techniques to improve student focus and about health
- More data analysis

High level documentation of directory,files

- Main.py contains all the flask api and business logic
- Index.html is the initial UI entrance page.
- Haarcascade_eye_tree_eyeglasses contains opencv model for eye detection.
- Haarcascade_frontalface_default contains opencv model for face detection
- Name of Database:"blink", Tables:"blink_data","screentime"

High level documentation of algorithm used

- We convert video frames to image and convert it into grayscale image as model predicts better in grayscale image.
- Haarcascade_frontalface_default contains opencv model for face detection. If the number of face is 1, then it cut out the face from the image.
- Haarcascade_eye_tree_eyeglasses contains opencv model for eye detection. If number of eyes is more than 2, then it detects as eyes open else detects as blink.
- After every two minutes, it stores the blink count and screen time percentage in postgres database.

Compile/running instructions

- git clone https://github.com/abhijeetmandloi/software_project.git
- For python version 3.x.x: pip install -r requirements.txt
- Create database in postgres by name “blink”
- Create two table blink_data, screentime