Smart Eyes Protector
Protect your valuable eyes

Introduction
Do your kids like playing games by using their smartphone? If yes, do you concern the side effects of using smartphone such as shortsightedness or strabismus? How do you prevent your kids from these drawbacks? Instead of taking their smartphone away, why don’t you consider using an application to monitor them automatically.

The application can....
- monitor user by using the front camera
- help user to eliminate their bad habits of using smartphone
- record performance of user
- provide a usage report for parents’ needs.

Multi core computation power makes complex image processing become possible!
- First locate the region of user’s eyes
- Then pinpoint the center of both left and right eyes
- The application can deal with users who wear glasses

Not only this method, but also containing totally six methods

Convert the image to gray level

Locate the user eyes, nose, face regions

Locate the center point of eyes, nostrils....

Compare with the reference photo

Calculate the pixel differences between the center points

\[
\text{Dis} = \frac{\text{Reference}}{\text{New}} \times 22
\]
We give no tolerance to improper use of smartphones!

Application can run seamlessly in the background

Conclusion
The average error of distance approximation is less than 10%. With the help of Android platform, the application can achieve the goal of monitoring user and at the same time minimize the inconvenience cause by the consuming background service.