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## Mini Project - Synopsis on “ DROWSINESS DETECTION ”

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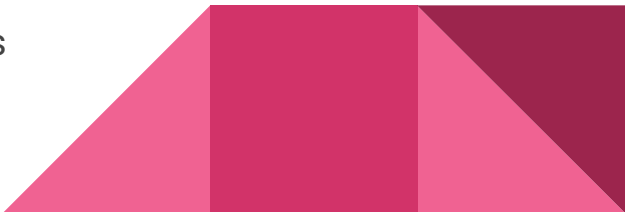
# About The Project (Description)

- A computer vision system that can automatically detect students drowsiness in a real-time video stream.
- It plays an alarm if the student appears to be drowsy.
- This detection technology aims to help educators intervene early when students are struggling to stay alert , ensuring better performance in online learning environments.



# Motivation (Reasons for Choosing the Topic)

Our project, " Drowsiness Detection for Online Classes," addresses a pressing issue affecting online learners. Key motivations include:

- Improved academic performance through enhanced focus.
  - Reduced distractions and increased engagement.
  - Enhanced student safety, preventing accidents from excessive sleepiness.
  - Personalized alerts promote self-awareness and time management.
  - Boosts productivity and reduces procrastination.
  - Fosters a healthy learning environment, mitigating sleep deprivation's negative impacts.
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# Problem Definition

- Problem statement : This can be used by students who tend to attend online classes for a longer period of time that may lead to distraction caused due to drowsiness.




# Tools and Technology

## **Tools:**


- OpenCV (Computer Vision Library).
- Python (Programming Language).
- Image Processing Libraries .

## **Domain:**

- Image Processing.
  - Artificial Intelligence (AI).
  - Human-Computer Interaction (HCI).
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# Expected Outcomes

Implementation of drowsiness detection with Python and OpenCV was done which includes the following steps:

- Successful runtime capturing of video with camera.
  - Successful detection of face followed by detection of eye.
  - If closure of eye for successive frames were detected, then it is classified as drowsy condition else it is regarded as normal blink.
  - In this implementation during the drowsy state the eye is not surrounded by circle or it is not detected.
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# Thank You

