



Tutedude SDE Assignment

Project Title: Focus & Object Detection in Video Interviews



Objective

Build a **video proctoring system** that:

- Detects whether a candidate is focused during an online interview.
 - Flags if unauthorized items (phone, books, notes, extra devices) appear in the video.
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Requirements

1. Frontend (Interview Screen)

- Simple web page where the interviewer can see the candidate's video.
- Candidate's video should be recorded/stored.
- Real-time detection of focus & suspicious events (e.g., "User looking away", "Phone detected").

2. Focus Detection Logic

- Use CV libraries (OpenCV, MediaPipe, TensorFlow.js, etc.).
- Detect if candidate is not looking at the screen for **>5 sec**.
- Detect if **no face** is present for **>10 sec**.
- Detect **multiple faces** in the frame (if possible)
- Log all events with timestamps.

3. Item/Note Detection

- Use object detection (YOLO / TF.js) to identify:
 - Mobile phone
 - Books / paper notes
 - Extra electronic devices
- Flag and log these events in real time.

4. Backend (Optional but Preferred)

- Store logs in a database (MongoDB / MySQL / Firebase).
- Provide API to fetch focus + item detection reports.

5. Reporting

- Generate a **Proctoring Report** with:
 - Candidate Name
 - Interview Duration
 - Number of times focus lost
 - Suspicious events (multiple faces, absence, phone/notes detected)
 - **Final Integrity Score** = 100 – deductions
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Deliverables

- GitHub Repository with **README** (setup instructions).
 - Live deployed link.
 - Demo video (2–3 mins).
 - Sample **Proctoring Report** (PDF/CSV).
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Evaluation Criteria

Criteria	Weightage
Functionality	35%
Code Quality & Documentation	20%
UI/UX Simplicity	15%
Accuracy (Focus + Object Detect)	20%
Bonus Points	10%



Bonus Points

- Eye closure/drowsiness detection
 - Real-time alerts for interviewer
 - Audio detection (background voices)
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Submission Guidelines

- **Deadline:** 9pm, 19th September 2025
 - **Submit here:** <https://forms.gle/6z9titKchv4TFM2i7>
 - GitHub repo link
 - Demo video link
 - Deployed link
 - Sample Proctoring Report
 - README must include installation & usage steps.
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