

CS06 SDP II - Logbook

Date	Event/Meeting	Details
13/1/2025	Meeting with Dr. Naoufel	Discussed the next steps for <i>Senior Design Project II</i> and evaluated the best approach to proceed with the project.
14/1/2025	Group Meeting	Held a team meeting to plan the upcoming tasks. Discussed work distribution and identified additional classes to integrate into the project.
14/1/2025	Meeting with Dr. Naoufel	Held a brief meeting with Dr. Naoufel to review and obtain approval for the newly proposed behavior classes.
15/1/2025	Collecting Data	Collaborated with Dr. Maregu to gather additional data from the CCTV system in the R Building lab to support the project.
22/1/2025	Collecting Data	Collected additional data in a new setting, focusing on a classroom environment to enhance the dataset.
23/1/2025	Collecting Data	Gathered additional data specifically focused on safety equipment classes to expand and refine the dataset.
24/1/2025	Splitting Data	Divided the collected data among group members to begin the labeling process for each class.
25/1/2025-8/2/2025	Labeling the Data	Over this period, the team started labeling the collected data. After dividing the data frames among group members, each member carefully annotated the data according to the classes. This process was essential for ensuring consistency and accuracy in the dataset, laying the groundwork for subsequent analysis and model training.
5/2/2025	Collecting Testing videos	Gather testing videos with all the different classes from the CCTV to be tested once the training process is finished.
13/2/2025	Training Our Model SDP II model	Trained the initial YOLOv8s model using the labeled dataset

20/2/2025	Collecting more training videos	After our initial training, we observed that our model was trained with an imbalance; therefore, we needed to collect more data on the behaviors.
20/2/2025	Split new data	We split the newly collected data among group members to start labeling the classes.
24/2/2025	Collecting data on new class	Gathered data for a new behavior class “cheating” from the lab CCTV.
27/2/2025	Split the cheating data	Splitting the new class frames among group members to start labeling the class.
3/3/2025	Meeting with dr. Naoufel	Discussed the integration of the “Phone” and “Cheating” behavior classes and reviewed dataset adjustments.
14/3/2025	Re-trained model	Re-trained the YOLOv8s model with the updated dataset including the new classes.
15/3/2025	Model testing	Evaluated the updated model using the collected test videos.
16/3/2025	Progress report submission	Submitted the SDP II progress report.
20/3/2025	Test Video Recording	Recorded additional footage for testing purposes.
24/3/2025	Interface Development	Worked on building and refining the user interface for the system

30/3/2025	Email Alert System Integration	Implemented an email alert system that automatically sends notifications when specific events are detected, enhancing real-time response and communication.
7/4/2025	Meeting with Dr. Naoufel	Discussed the content and structure of the SDP II final report.
8/4/2025	Group meeting	Held a group meeting to review current progress and discuss the remaining tasks required for system integration and testing. The team also outlined a timeline for upcoming deliverables and coordinated next steps to ensure timely project completion
10/4/2025	Report Distribution	Assigned sections of the final report to group members.
17/4/2025	Collecting more videos	Collecting more videos for testing the system.
22/4/2025	Final Test Video Collection	Collected final set of videos for system testing and validation.
23/4/2025	SDP II Presentation Preparation	Work began by splitting and creating slides for the SDP presentation, highlighting major achievements, challenges, and future plans.
25/4/2025	SDP II Final Report Preparation	The group met on campus to finalize the SDP II Final Report.
27/4/2025	SDP II Final Report Submission	Submitted the SDP II Final Report.
29/4/2025	SDP II presentation	The team delivered the final presentation, showcasing the project to supervisors and examiners. The presentation highlighted key achievements,

		demonstrated the system's functionality, and addressed questions about potential improvements and future applications.
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