

1. PROJECT PROPOSAL

1.1 Background to the Problem

Effective oral presentation is a cornerstone of academic success and professional communication, yet many students receive only intermittent, subjective, and resource-constrained feedback on this vital skill. In classroom and remote learning environments alike, instructors face severe time pressures that prevent detailed, repeated assessment of every student's posture, gesture, vocal delivery, and slide design. As a result, learners frequently remain unaware of persistent habits such as monotonous tone, excessive filler words, distracting gestures, or poorly structured slides that undermine clarity, confidence, and audience engagement. The gap between the pedagogical goal (consistent, actionable coaching) and typical classroom practice (brief, inconsistent commentary) creates inequities in learning opportunity and slows measurable progress in presentation competence. The root causes of this problem are both practical and methodological. Human assessment of presentations is inherently variable: different reviewers emphasize different criteria, and fatigue or large class sizes reduce the depth and frequency of feedback. Existing technological tools address parts of the problem automated speech coaches, slide-readability checkers, or isolated gesture trackers but most operate in a single modality and are not tailored to the constraints of educational workflows. Consequently, students and educators lack an integrated, objective, and repeatable system that can synthesize visual, auditory, and semantic signals into clear, prioritized guidance and longitudinal progress metrics.

Recent advances in computer vision, speech recognition, and natural language understanding now make an integrated solution both feasible and timely. A multimodal system that combines pose estimation, ASR and prosody analysis, and slide visual or semantic evaluation can deliver granular, evidence-based feedback at scale while preserving instructor oversight. Such a system would not only accelerate individual learning through immediate, actionable recommendations, but also reduce instructors' assessment load, enable data-driven tracking of class-level learning outcomes, and create reproducible artifacts for formative assessment and research. At the same time, design must account for ethical and operational constraints user consent, secure handling of sensitive media, role-based access, and transparent scoring to ensure pedagogical value without compromising privacy or fairness. Taken together, these considerations motivate the Presento project: an AI-enabled, multimodal platform designed to provide students and educators with trustworthy, scalable, and pedagogically meaningful feedback on presentation performance.

1.2 Solution to the Problem and Process Model Selection

Several existing software solutions already demonstrate the usefulness of AI-based presentation coaching. Microsoft's Presenter Coach (Speaker Coach) inside PowerPoint provides real-time rehearsal feedback such as pace, filler words, and inclusivity of language. Platforms like Yoodli and Orai offer AI-powered coaching focused mainly on speech delivery, while VirtualSpeech provides VR-based public speaking training. These tools confirm the global demand for automated presentation evaluation, but they either focus only on limited aspects (like speech) or lack

integration for educational settings with instructor dashboards and progress tracking. Presento extends these capabilities by combining multimodal analysis body language, speech, and slides into one comprehensive system tailored for students and educators.

For this project, the Scrum framework, a widely practiced Agile method, is the most suitable development model. Presento's project environment is characterized by partly stable and partly evolving requirements. Core functions like video upload, report generation, and dashboards are well-defined, while performance thresholds for AI models, user interface refinements, and feedback wording will evolve as real data and user feedback are incorporated. A rigid model such as Waterfall or V-model would struggle to handle these evolving needs, whereas Scrum allows flexibility by accommodating iterative changes at the end of each sprint. The selected model supports the anticipated team size effectively. Scrum encourages small, cross-functional teams of 5 - 9 members, which aligns with our team structure that includes frontend developers, backend engineers, ML specialists, QA testers, and a product owner. Daily stand-ups, sprint reviews, and retrospectives ensure strong communication and coordination, helping the project stay on track. The solution is feasible to meet the business objective because working increments of the product can be delivered regularly, tested with users, and refined quickly, reducing reliance on assumptions and minimizing wasted effort.

Scrum is highly flexible in adapting to changes in scope, technology, or user requirements. For example, if early feedback reveals that students value filler-word detection more than gesture analysis, the backlog can be reprioritized in the next sprint. Similarly, if new speech recognition models outperform Whisper, these can be integrated into a sprint cycle without disrupting the overall process. This flexibility ensures the system evolves with real needs rather than being constrained by initial assumptions. From a creative problem-solving perspective, Scrum supports combining product engineering with machine learning experiments in structured cycles. For example, one sprint may focus on building the feedback UI while another sprint integrates a prototype of improved gesture recognition. This hybrid approach ensures that technical research and user-facing value progress together, which is vital in AI-driven systems. The target users of the solution are students, educators, and trainers. Students benefit by receiving structured, data-driven insights that help them improve their presentation skills and confidence. Educators benefit from reduced workload, as Presento automates evaluation while still providing detailed insights they can trust. Trainers gain access to standardized reports that guide coaching with measurable progress indicators. The project also contributes scientifically by documenting datasets, benchmarking multimodal models for classroom presentations, and creating structured evaluation metrics that can be shared in academic or industry research. These contributions are well documented in the development process, ensuring transparency and reproducibility. Evidence for Scrum's suitability is found in how it addresses project risks and uncertainties. Risks such as model underperformance, misaligned UI design, or unscalable infrastructure are surfaced quickly because each sprint delivers an integrated increment of the system. By tackling high-risk items early and validating them through sprint reviews, risks are managed proactively rather than emerging late.

Scrum's time-boxed sprints align naturally with the project schedule, supporting predictable delivery while keeping room for adaptation.

In comparison to other models, Waterfall and V-model assume stable requirements and are therefore not suitable. Prototyping is useful in early ideation but does not provide a full delivery framework. Incremental development provides staged growth but lacks the structured ceremonies and stakeholder involvement that Scrum provides. RAD emphasizes UI speed but is less effective for AI-heavy pipelines. XP focuses strongly on engineering practices, which we will adopt within Scrum, but as a standalone model it lacks a product-oriented delivery structure. DSDM and FDD are heavier or more enterprise-oriented, not fitting the size and dynamics of our team. Overall, Scrum strikes the right balance between structure and flexibility, making it the most suitable choice for Presento.

1.3 Project Role Identification and Responsibilities

The project involves several key roles across development and management. The Product Owner is responsible for defining and prioritizing requirements, maintaining the product backlog, and ensuring the product vision aligns with educational objectives. The Scrum Master facilitates the Scrum process, removes obstacles, and ensures smooth communication within the team. Developers (frontend, backend, and ML engineers) implement features, integrate models, and ensure technical quality. QA testers are responsible for validating functionality, writing automated tests, and ensuring acceptance criteria are met. Instructors and domain experts act as external stakeholders who provide feedback during sprint reviews, ensuring the tool aligns with real-world teaching and learning needs.

During requirements gathering, the Product Owner works closely with educators and stakeholders to capture needs, while developers and ML engineers provide technical feasibility insights. In the design stage, frontend developers focus on user interfaces, backend developers on system architecture, and ML engineers on model integration strategies. In implementation, developers build the features in short sprints, while QA testers verify that acceptance criteria are satisfied. During testing, QA takes the lead with support from developers for bug fixing and ML engineers for accuracy validation. In deployment, DevOps/MLOps engineers handle release pipelines, while the Product Owner communicates updates to stakeholders.

Decision-making responsibility is primarily held by the Product Owner regarding feature priority and scope, while technical decisions are shared among developers with coordination from the Scrum Master. Quality assurance is the responsibility of QA testers, but the entire team shares accountability for maintaining standards. Resource management is handled collectively by project management roles, with input from the Scrum Master to remove bottlenecks and optimize workload distribution.

Responsibilities are distributed based on expertise: frontend developers focus on UI/UX elements such as dashboards and upload pages, backend developers handle APIs, storage, and job processing, while ML engineers specialize in integrating models like Whisper and BERT. QA testers specialize in validation, and instructors contribute domain expertise. This allocation ensures that each team member works in their area of strength while still collaborating across functions, which aligns well with Scrum's cross-functional team philosophy.

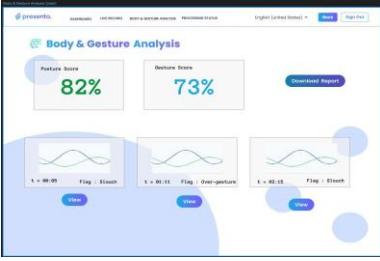
2. PRODUCT REQUIREMENTS DOCUMENT (PRD)

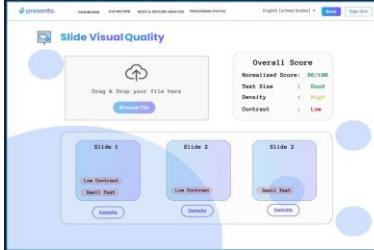
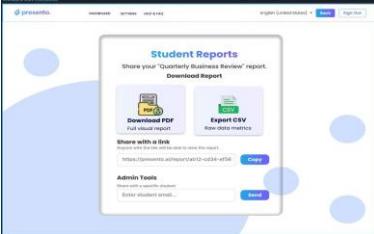
The PRD (Product Requirement Document) for our project has been prepared in two parts - one focusing on the functional requirements, and the other non-functional requirements. Since the PRD was created in Excel, converting it to PDF has made formatting within a Word document difficult. As a result, the functional requirements and non-functional requirements have been included on the following page.

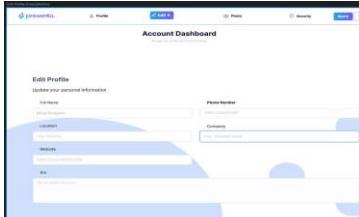
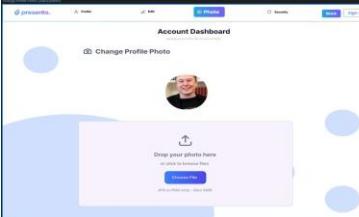
Product Requirement Document (PRD) - Version: 1.0

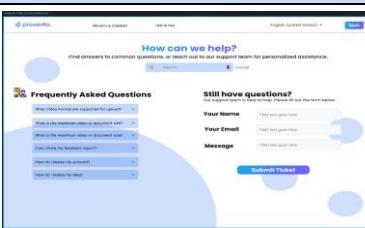
Template Name	Presento
Goals & Objective	Build an AI-powered web application that lets students upload or record presentations and get automated, multimodal feedback on posture/gesture, speech delivery, and slide design. Also, provide progress tracking and shareable reports, and reduce reliance on in-person coaching by 70% while maintaining or improving scores.
Client Information	Students, Teachers and Job Seekers
Product Type	Web Application
Domain	AI-Assistant
Access Layers	User, admin
Design Required	Yes

Phase	Item No	Specification Role	Screen Definition	User Story	Acceptance Criteria	UI Design	Tags
Feature: 1		Auth Feature					
phase 1	1	Signup [admin] [User]	<Form> <input name="name"> <input name="email"> <input type="password"> <input type="re-password"> <input type="user-type"> <link href="Email verification"> <button type="signup"> <link href="signin">	As a user, I want to create an account so I can access Presento's features.	<ul style="list-style-type: none"> - Email (input) field should only accept valid unregistered email address as input, otherwise will show an "email already used" message. - Password (input) should be minimum 8 characters long. Otherwise show an invalid message. - Re-password (input) should match password. Otherwise show "password do not match" message. - User type must be selected. Otherwise show "Please select a user type". - On clicking signup button, credentials will be stored in database, user will be redirected to their dashboard. - A copy of the login information will be sent to their email. 		signup
phase 1	2	Signin [admin] [User]	<Form> <input type="email"> <input type="password"> <checkbox type="remember me"> <button type="signin"> <link href="forgot password"> <link href="signup">	As a user, I want to sign in securely.	<ul style="list-style-type: none"> - Email (input) must exist in database. Invalid email shows "email not found". - Password (input) must match stored hash; otherwise "invalid credentials". - If "Remember me" is checked, session persists after logout until expiry. - Successful login → redirect to dashboard. - Incorrect login → retry option with clear error. 		signin

phase 1	7	Upload Presentation [User]	<Unordered list> Drag & Drop area Browse to upload (.mp4/.mov) Optional slide upload (.pdf/.pptx/.png) Topic input field Progress bar Cancel upload Retry upload Submit button	As a user, I want to upload my presentation video or slide for analysis.	- Clicking Browse opens file picker - Only valid formats (.mp4/.mov/.pdf/.pptx/.png) accepted - Invalid file → show error message "unsupported file type" - File size validated (max size limit enforced) - Progress bar shows real-time upload status - Cancel button stops upload immediately - Retry button restarts failed upload - On success, metadata (file name, topic, slides) sent to server		upload_Presentation
phase 1	8	Live Record [User]	<Unordered list> Webcam video preview Microphone capture Duration indicator Start recording button Pause/Resume button Stop recording button Save as draft button	As a user, I want to record directly without external tools.	- Browser requests permission for camera & mic - Recording starts only after permission granted - Audio and video must stay in sync - Duration indicator updates in seconds - Pause/Resume button functions smoothly - Stop button finalizes recording and saves file - Save as draft stores video in user's queue for later submission		live_Record
phase 1	9	Processing Status [User]	<Unordered list> Queue card Status indicators: queued Status indicators: analyzing Status indicators: complete ETA display Retry button (safe)	As a user, I want to see the analysis progress.	- Upload enters Queued state first - Automatically transitions from Queued → Analyzing → Complete - ETA (estimated time) displayed in minutes/seconds - On failure, retry button available with error message shown - Duplicate job submissions prevented - Completed analysis automatically redirects to Feedback Report page		processing_Status
Feature: 4 Multimodal Analysis (AI)							
phase 1	10	Body & Gesture Analysis (BlazePose + classifier) [User]	<Form> <Screen=BodyGestureAnalysis> <frame-snapshot> <metric=gesture-score> <metric=posture-score> <flag=slouch> <flag=over-gesture> <chart=timeline> <button=download-report>	As a user, I want objective feedback on my body language. And the feedback will be in an animated format.	- clicking Dashboard takes user to dashboard page - go to Body & Gesture report on click - view annotated frame snapshots on click - open per-segment scores - download CSV landmarks with run-ID		BodyGestureAnalysis
phase 1	11	Speech Analysis (Whisper + prosody) [User]	<Form> <Screen=SpeechAnalysis> <player=audio-video> <transcript-box> <metric=wpm> <metric=volume> <metric=pitch> <counter=filler-words> <button=download-transcript>	As a user, I want to improve my delivery.	- clicking Dashboard takes user to dashboard page - go to Speech report on click - see timestamps aligned transcript - filter filler word list - WPM flagged outside range - handle noisy audio gracefully		SpeechAnalysis

phase 1	12	Slide Visual Quality (CNN) [User]	<pre><Form> <Screen=SlideVisualQuality> <upload=slides> <metric=text-size> <metric=density> <metric=contrast> <metric=layout-consistency> <score-bar> <button=export-report></pre>	As a user, I want to know if my slides are readable and clean.	<ul style="list-style-type: none"> - clicking Dashboard takes user to dashboard page - go to Slide quality report on click - see multi-label predictions per slide - each label → actionable advice - normalized score 0–100 displayed - export report 		SlideVisualQuality
phase 1	13	Slide Semantics (BERT) [User]	<pre><Form> <Screen=SlideSemantics> <text-box=slide-content> <flag=off-topic> <flag=jargon> <readability-meter> <suggestion-box> <button=view-examples></pre>	As a User, I want clear, relevant slide text.	<ul style="list-style-type: none"> - clicking Dashboard takes user to dashboard page - go to Slide semantics report on click - show off-topic flagged text - surface readability range - concise suggestions with examples available on click 		SlideSemantics
Feature: 5 Results & Reporting							
phase 1	14	Feedback Report [User]	<ul style="list-style-type: none"> <Unordered list> Section scores Annotated images Transcript excerpts Improvement tips 	As a user, I want an actionable report I can understand quickly.	<ul style="list-style-type: none"> - Report loads in under 2 seconds once ready - Sections include Body, Speech, and Slides feedback - Annotated screenshots visible and copyable - Transcript excerpts highlight filler words and pauses - Improvement tips are clearly listed - Optional share link available with correct access control 		feedback_Report
phase 1	15	Download & Share [User][Admin]	<ul style="list-style-type: none"> <Unordered list> Export as PDF Generate shareable link Link access control Watermark toggle 	As a user, I want to share progress with teachers or peers.	<ul style="list-style-type: none"> - PDF export renders all visuals (charts, annotations, text) - Share link generated with time-to-live (TTL) and permission control - Unauthorized users cannot access shared link - Watermark optional and applied if selected 		downloadShare

phase 1	16	Progress Dashboard [User]	<Unordered list> Trend chart: Words per minute Trend chart: Filler word rate Posture score trend Slide score trend Date filters Attempt comparison	As a user, I want to track improvement over attempts.	- At least 4 KPIs displayed (WPM, filler words, posture, slides) - Users can apply date filters - Users can compare multiple attempts side by side - If no data, empty state message shown ("No reports yet, upload your first presentation!")		progress_Dashboard
Feature: 6 Profile & Account							
phase 1	17	View Profile [User][Admin]	<Unordered list> User name User role Email address Attempts count	As a user, I want to see my account info at a glance.	- Displays accurate profile information - Attempts count matches reports in database - Sensitive information kept private		view_Profile
phase 1	18	Edit Profile [User][Admin]	<Unordered list> Update name Update institution Communication preferences Save changes button	As a user, I want to keep my info current.	- Fields validated before saving - Save success → confirmation message shown - Invalid input → error message displayed - Changes stored in database instantly		edit_Profile
phase 1	19	Change Profile Photo [User][Admin]	<Unordered list> Upload new image Replace existing avatar Preview before save	As a user, I want to personalize my profile.	- Accepts only valid image formats (.jpg, .png) - File size validated - Immediate preview before saving - Avatar updates across all pages instantly		chg_ProfilePhoto

phase 1	20	Change Password [User][Admin]	<Unordered list> Current password New password Confirm new password Save button	As a user, I want to secure my account.	<ul style="list-style-type: none"> - Password policy enforced (min 8 chars, also follow complexity rules) - New password must match the confirm field - On success → old tokens invalidated - User receives confirmation email 		cng_pass
Feature: 7 Admin Dashboard							
phase 1	21	Student Reports List [Admin]	<Unordered list> Student name Presentation title Date Scores Status Filters Pagination Export CSV	As an admin, I want to review many reports quickly.	<ul style="list-style-type: none"> - Table lists all student reports - Filters by student, date, and score work correctly - Pagination enabled for large datasets - Admin can export reports to CSV format 		stu_ReportList
Feature: 8 Help & Reliability							
phase 1	22	Admin Notes [Admin]	<Unordered list> Comment input field Comment list Edit comment option Delete comment option Audit trail	As an admin, I want to add guidance when needed.	<ul style="list-style-type: none"> - Admin can add comments to student reports - Comments versioned with timestamp and user ID - Students can view instructor comments - Edit and delete actions logged with audit trail 		admin_Notes
phase 1	23	Help & FAQ [User][Admin]	<Unordered list> Common questions Search bar Contact support form	As a user, I want quick answers when stuck.	<ul style="list-style-type: none"> - Users can search FAQs - Submitting contact form creates support ticket - User receives email confirmation for submitted ticket 		help_fad

phase 1	24	Error Handling & Retries [User][Admin]	<p><Unordered list></p> <ul style="list-style-type: none"> Error message display Retry button Recovery options 	As a user, I want safe retries if something fails.	<ul style="list-style-type: none"> - Network errors mapped to clear, human-readable messages - File format errors clearly displayed - Retry attempts are safe and idempotent - User can recover from failures without duplicate jobs 		errorHandling_Retries
phase 1	25	Privacy & Consent [User][Admin]	<p><Unordered list></p> <ul style="list-style-type: none"> Consent checkbox Data policy link Delete-my-data option 	As a user, I want control over my data.	<ul style="list-style-type: none"> - Users must explicitly give consent before video/audio analysis - Policy link available and accessible - “Delete my data” flow works and removes user files permanently 		privacy_Consent

Product Requirement Document (PRD) - Version: 1.0				
Project Overview				
Template Name	Presento			
Goals & Objective	Build an AI-powered web application that lets students upload or record presentations and get automated, multimodal feedback on posture/gesture, speech delivery, and slide design. Also, provide progress tracking and shareable reports, and reduce reliance on in-person coaching by 70% while maintaining or improving scores.			
Client Information	Students, Teachers and Job Seekers			
Product Type	Web Application			
Domain	AI-Assistant			
Access Layers	User, admin			
Design Required	Yes			
Non-Functional Requirements				
Phase	Item No	Category	Requirement Description	Acceptance Criteria
phase 1	1	Performance	<ul style="list-style-type: none"> - System must process and generate feedback report within 10 seconds for a 5-min video. - Dashboard must load recent reports and KPIs in under 3 seconds. 	<ul style="list-style-type: none"> - Measured response time \leq 10s in 95% of test cases under normal load. - Page load \leq 3s with dataset of 1,000 reports.
phase 1	2	Reliability	<ul style="list-style-type: none"> - System should ensure 99.5% uptime per semester for students and educators. - Failed video uploads must auto-retry up to 2 times with user-friendly error messages. 	<ul style="list-style-type: none"> - Uptime logs and monitoring reports confirm availability. - Logs show retry attempts; users notified clearly on failure.
phase 1	3	Security	<ul style="list-style-type: none"> - All user data (video, audio, slides) must be encrypted. - Only authenticated users can access reports, with role-based access (User/Admin). 	<ul style="list-style-type: none"> - Verified by penetration test and encryption checks. - Unauthorized access attempts denied and logged.

phase 1	4	Usability	<ul style="list-style-type: none"> - Interface should support drag-and-drop uploads, accessible fonts, and mobile-friendly UI. 	<ul style="list-style-type: none"> - User testing confirms ≥85% positive usability score.
phase 1	5	Maintainability	<ul style="list-style-type: none"> - Code must follow modular architecture with proper documentation and version control. - System must allow model re-training without major code changes. 	<ul style="list-style-type: none"> - Code reviews confirm modularity; update cycle < 2 days for minor bug fixes. - Retraining pipeline tested successfully with new dataset integration.
phase 1	6	Scalability	<ul style="list-style-type: none"> - System should handle at least 10,000 users with minimal performance. - Database and storage should scale horizontally for growing video data. 	<ul style="list-style-type: none"> - Load test simulates 10k users, maintaining report generation within 15 seconds. - Benchmark confirms scaling with 2x storage nodes without downtime.

3. PROJECT ESTIMATION AND SCHEDULING

3.1 Effort and Cost Estimation

1. Scope definition

- The project scope, as stated in the PRD, covers the following major elements:
- Authentication & user profiles: signup, signin, password reset, and profile management.
- Upload and live recording of presentations: video upload, slide upload, file-size validation, progress bar.
- Processing pipeline: extraction of frames, audio, slides, use of job queues, ETA estimation, and job status.
- Body and gesture analysis: MediaPipe BlazePose and classifier models to detect posture and gestures.
- Speech analysis: Whisper and prosody/filler analysis for transcripts and timestamps.
- Slide visual and semantic analysis: CNN for visuals, BERT for semantic similarity, OCR for slide content.
- Feedback report generation: annotated images, section scores, PDF export, shareable links with access control.
- Dashboard and admin: student progress tracking, cohort overview, report access, export of CSV data.

The team consists of five student members listed in the PRD, with the supervisor acting as product owner.

2. Lines of Code (LOC):

To estimate the Lines of Code (LOC), we applied the Function Point (FP) to LOC estimation method. This approach allowed us to maintain consistency in measuring LOC throughout the project, rather than relying on manual guesses. Since Function Points are generally easier to determine, this method provided a more reliable estimation process.

Calculating FP:

Each of the 14 General System Characteristics (GSCs),

scale = 3 (Average)

$$F = 14 \times 3 = 42$$

Calculating Complexity Adjustment Factor, CAF = $0.65 + (0.01 \times F)$

$$= 0.65 + (0.01 \times 42)$$

$$= 1.07$$

Calculating Unadjusted Function Point (UFP):

Weighting Table (Complexity Level)

Function Units	Low	Avg	High
EI (External Inputs)	3	4	6
EO (External Outputs)	4	5	7
EQ (External Inquiries)	3	4	6
ILF (Internal Logical Files)	7	10	15
EIF (External Interface Files)	5	7	10

i. External Inputs

Data entering the system from users/admins	
Signup form (phase 1, item 1)	<input=name>, <input=email>, <input=password>, <input=re-password>, <input=user-type> → new account creation.
Signin form (phase 1, item 2)	<input=email>, <input=password> → authentication
Forgot password (phase 1, item 3)	<input=email> → request reset link.
Upload presentation (phase 1, item 7)	upload .mp4/.mov/.pptx/.png files, topic input.
Live record (phase 1, item 8)	webcam + mic capture, saves recording.
Admin Notes (phase 1, item 22)	comment input by instructors.
Profile update (phase 1, item 18)	edit institution, preferences.
Change profile photo (phase 1, item 19)	upload image.
Change password (phase 1, item 20)	current + new password input.
Consent & privacy (phase 1, item 25)	consent checkbox, delete-my-data option.

ii. External Outputs

Processed data leaving the system (reports, dashboards, exports)	
Feedback Report (phase 1, item 14)	body/speech/slides annotated results, improvement tips.
Speech Analysis (phase 1, item 11)	transcript, WPM, filler word counts.
Body & Gesture Analysis (phase 1, item 10)	annotated frame snapshots, posture/gesture scores.
Slide Visual Quality (phase 1, item 12)	text size, density, contrast, layout metrics.
Slide Semantics (phase 1, item 13)	readability, jargon flags, topic drift.
Progress Dashboard (phase 1, item 16)	trend charts (WPM, posture, slide scores).

Download & Share (phase 1, item 15)	export as PDF, shareable link.
Admin Reports List (phase 1, item 21)	report table + CSV export.
Dashboard (phase 1, item 6)	recent uploads, last 5 reports.

iii. External Inquiries

Retrieval/display requests with minimal processing.	
Processing Status (phase 1, item 9)	status indicators: queued, analyzing, complete.
Dashboard quick actions (phase 1, item 6)	shortcuts to upload/reports.
View Profile (phase 1, item 17)	user info retrieval.
Progress filters (phase 1, item 16)	compare attempts, date filters.
Admin filters (phase 1, item 21)	filter student reports by date, score.
Help & FAQ (phase 1, item 23)	query FAQs, search bar.

iv. Internal Logical Files

Data maintained within the system	
User	id, name, email, role, status.
Profile	institution, avatar, preferences.
PresentationAttempt	stores uploaded/recorded videos.
SlideDeck	uploaded slides file + metadata.
FeedbackReport	structured analysis result.
Transcript	speech-to-text output.
InstructorNote	admin-added comments.
ConsentRecord	privacy and consent data.

v. External Interface Files

External files/models referenced but not maintained internally.	
BlazePose model	external posture detection.
Whisper model	external speech-to-text.
BERT/CNN models	semantic + visual slide analysis.

3. Total Calculation

$$UFP = (EI \times 4) + (EO \times 5) + (EQ \times 4) + (ILF \times 10) + (EIF \times 7)$$

$$UFP = (20 \times 4) + (17 \times 5) + (10 \times 4) + (8 \times 10) + (3 \times 7)$$

$$\begin{aligned} UFP &= 80 + 85 + 40 + 80 + 21 \\ &= 306 \end{aligned}$$

Adjustment factor (CAF) = 1.07

$$\begin{aligned} FP &= UFP \times CAF \\ &= 306 \times 1.07 \\ &= 327.42 \end{aligned}$$

Final FP Count: 327.42

Final FP = ~327

4. Function Points to LOC (per module and language)

The Adjusted Function Points (~327) were distributed across the technology stack defined in the PRD.

- i. Frontend (React/JS) = 30%
- ii. Backend (Flask/Python) = 25%
- iii. ML modules (TensorFlow, Whisper, BERT) = 35%
- iv. Database (SQL) = 10%

FP to LOC Conversion:

- i. JavaScript/React = 55

- ii. Python backend = 50
- iii. Python ML = 60
- iv. SQL = 13

Area	%FP	FP count	Language	LOC/FP	LOC = FP count × LOC
Frontend	30%	98.1	JS	55	5,396
Backend	25%	81.8	Python	50	4,090
ML modules	35%	114.5	Python ML	60	6,870
Database	10%	32.7	SQL	13	425
Total LOC					16,781

Now, LOC to Effort Calculate:

$$\text{Formula: } (KLOC \times \frac{B^{0.333}}{P})^3 \times \frac{1}{T^4}$$

$$E = (16.781 \times \frac{5^{0.333}}{1.6})^3 \times \frac{1}{3^4}$$

= 71.102 Person-Month for a team with 5 members

Here:

$$LOC = 16,781$$

$$B = 5$$

$$P = 1.6$$

$$T = 3 \text{ months}$$

$$E = (71.102 / 5) PM$$

$$= 14.22 \text{ Person - Hour}$$

5. COCOMO Estimation

- a) SLOC (Source Lines of Code) = 16,781
- b) Coefficient (Effort Factor, a) = 3.0 (semi-detached)
- c) Project complexity, P = 1.12
- d) Time coefficient, T = 0.35 (for semi-detached)
- e) Development team assumption: to be calculated

Selected Mode: Semi-detached (appropriate for mixed complexity).

Formula: Effort = Coefficient_{effort} × (KLOC)^P

Coefficient = 3.0,

$$P = 1.12$$

$$\text{KLOC} = 16.78.$$

Now,

$$\begin{aligned}\text{Effort} &= 3 \times (16.78)^{1.12} \\ &= 70.62 \text{ PM}\end{aligned}$$

Total effort needed = 70.62 PM

Development Time Calculation

$$DM = 2.5 \times (\text{PM})^T$$

$$DM = 2.5 \times (70.62)^{0.35}$$

$$= 11.09 \text{ Months}$$

Development duration ≈ 11.09 months

Average Staffing Calculation:

$$ST = \frac{\text{PM}}{\text{DM}}$$

$$ST = \frac{70.62}{11.09}$$

$$= 6.36 \approx 6 \text{ people}$$

Average team size required = 6 people

Parameter	Value
SLOC	16,781
PM (Effort)	70.62 Person-Months
DM (Duration)	11.55 Months
ST (Average Staffing)	6 People

Assumptions and Uncertainty

Assumption	Value
GSC scale	3 average

LOC/FP ratios	JS=55, Py=50, ML=60, SQL=13
Dynamic formula params	B=5, P=1.6, t=3
Team size	5 to 9

3.2 Project Scheduling

1. Breaking the Project into Tasks & Responsibilities

The project “Presento” has been broken down into six phases, each containing tasks and clearly assigned responsibilities:

- **Analysis:** Scope definition, system architecture, security & privacy requirements.
- **Planning:** Repo & environment setup, DB schema planning, task processing strategy, SLA drafting.
- **Designing:** UI wireframes, ML pipeline design, RBAC mapping, dashboards, feedback report flows.
- **Implementation:** Authentication, upload, queue, preprocessing, ML models (pose, speech, slide), aggregation, dashboards, reporting, instructor features, security, logging.
- **Testing:** Unit tests, integration, scalability/load testing, system & acceptance testing.
- **Documentation:** Documentation & handover
- **Maintenance**

2. Effort Allocation (40–20–40 Guideline)

Total estimated Effort = 11.55 Person-Months (from COCOMO analysis)

≈ 12 PM

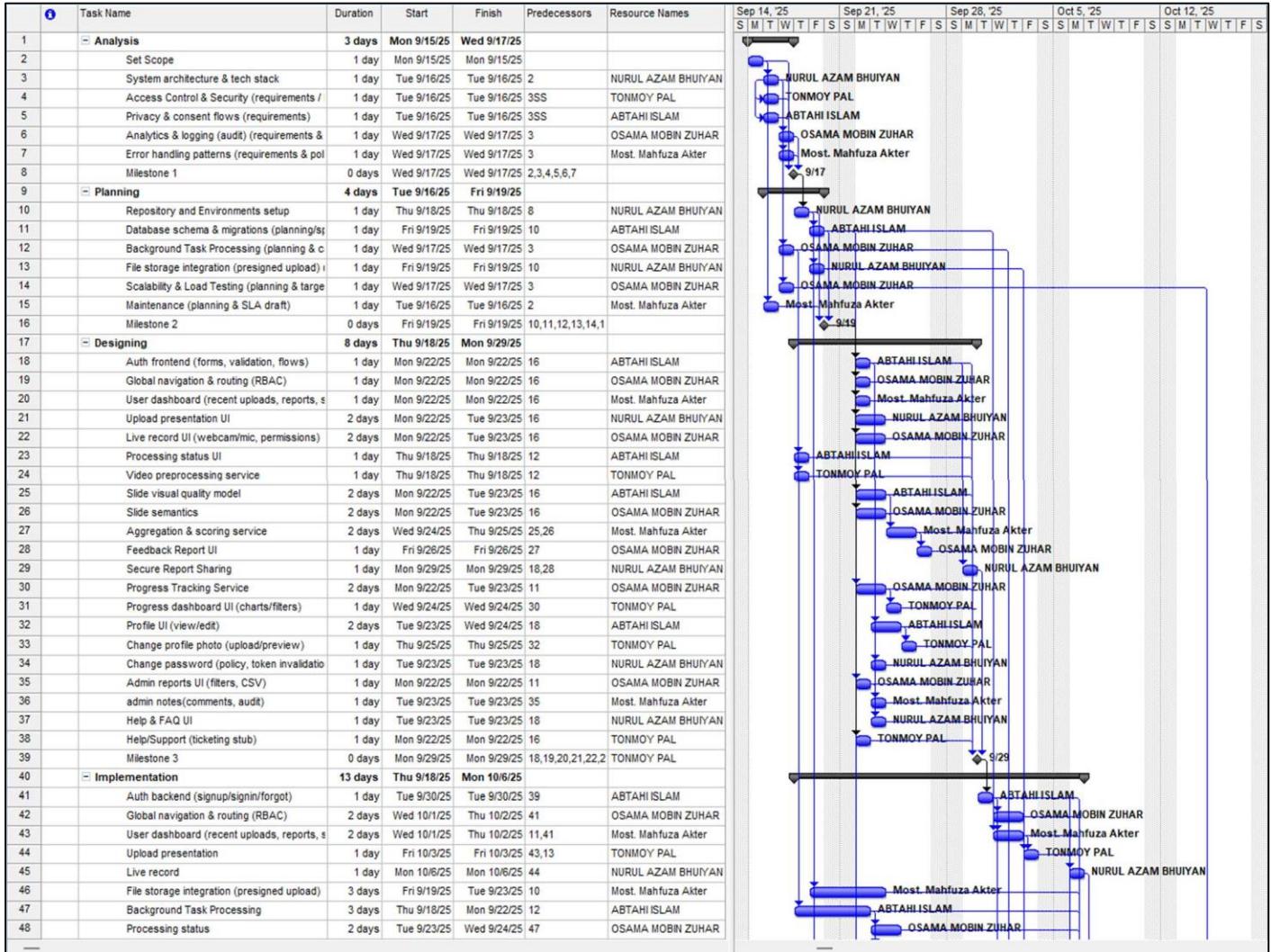
. Estimation details given below:

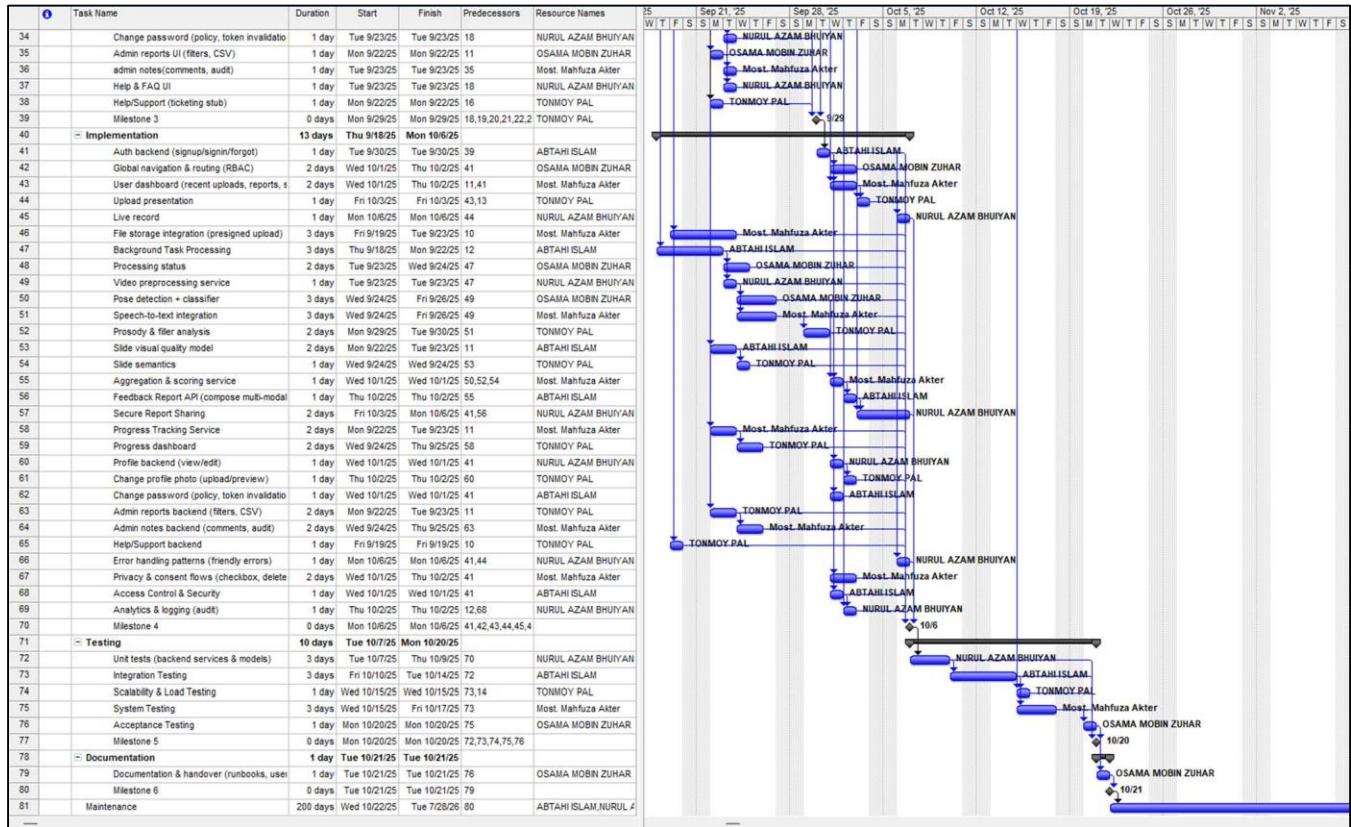
- Analysis & Design (40%) → 4.8PM (Scope, planning, architecture, UI/UX design, ML design)
- Implementation (20%) → 2.4PM (Actual coding, integration, deployment setup)
- Testing & Documentation (40%) → 4.8 PM (Testing, validation, handover, maintenance readiness)

3. Schedule with Milestones & Deadlines – Gantt Chart and Overview

- Milestone 1: Analysis → 3 Days.
- Milestone 2: Planning → 4 Days.
- Milestone 3: Designing → 8 Days.
- Milestone 4: Implementation → 13 Days.
- Milestone 5: Testing → 10 Days.

- Milestone 6: Documentation → 1 Day.





4. Major Deliverables per Milestone

- Milestone 1: Scope, architecture, tech stack selection.
- Milestone 2: Environment setup, DB schema, storage planning.
- Milestone 3: Approved UI/UX designs, ML design blueprints.
- Milestone 4: Functional.
- Milestone 5: Test reports, validated PRD conformance.
- Milestone 6: Final documentation, admin/user training docs.

5. Earned Value Analysis (EVA)

We assume,

Budget at Completion (**BAC**) = 12 PM

Planned Value, **BCWS** = 6 PM

Earned Value, **BCWP** = 5.4 PM

Actual Cost, **ACWP** = 6.6 PM

Now calculate:

Schedule performance index, **SPI** = **BCWP** / **BCWS**

$$= \frac{5.4}{6}$$

$$= 0.9 < 1 (\text{Behind schedule})$$

Cost performance index, **CPI = BCWP / ACWP**

$$= \frac{5.4}{6.6}$$

$$= 0.818 < 1 \text{ (Over Budget.)}$$

Schedule variance, **SV = BCWP – BCWS**

$$= 5.4 - 6 \text{ PM}$$

$$= -0.6 \text{ (Behind schedule by 0.6 PM)}$$

Cost variance, **CV = BCWP – ACWP**

$$= 5.4 - 6.6$$

$$= -1.2 \text{ PM}$$

project is over budget by 1.2 PM (~1 month)

Percent scheduled for completion = $(\text{BCWS} / \text{BAC}) \times 100\%$

$$= (6 / 12) \times 100\%$$

$$= 50\%$$

(half of the project should have been done.)

Percent scheduled for completion = $(\text{BCWP} / \text{BAC}) \times 100\%$

$$= (5.4 / 12) \times 100\%$$

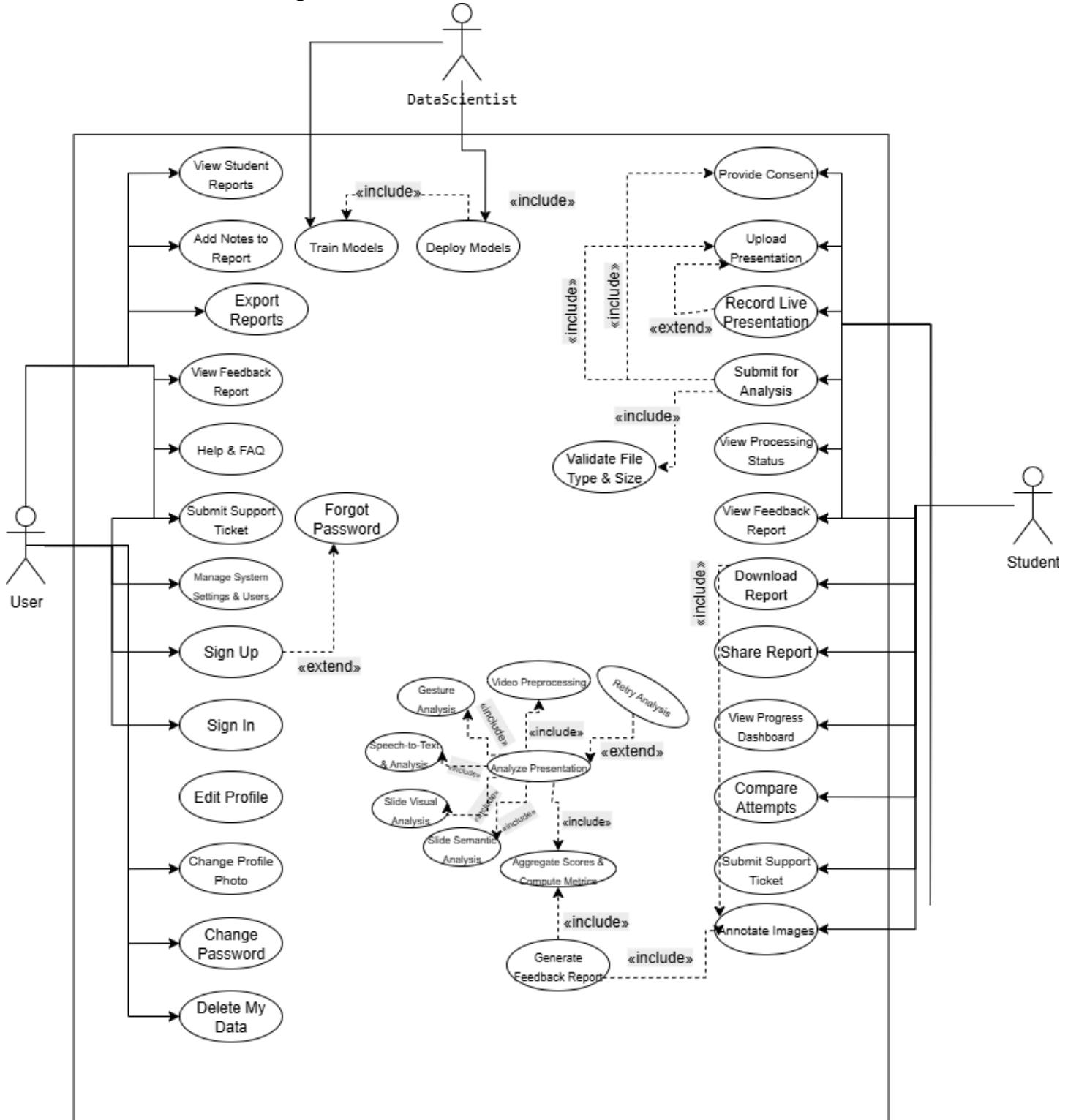
$$= 45\%$$

(Only 45% of the work has actually been completed.)

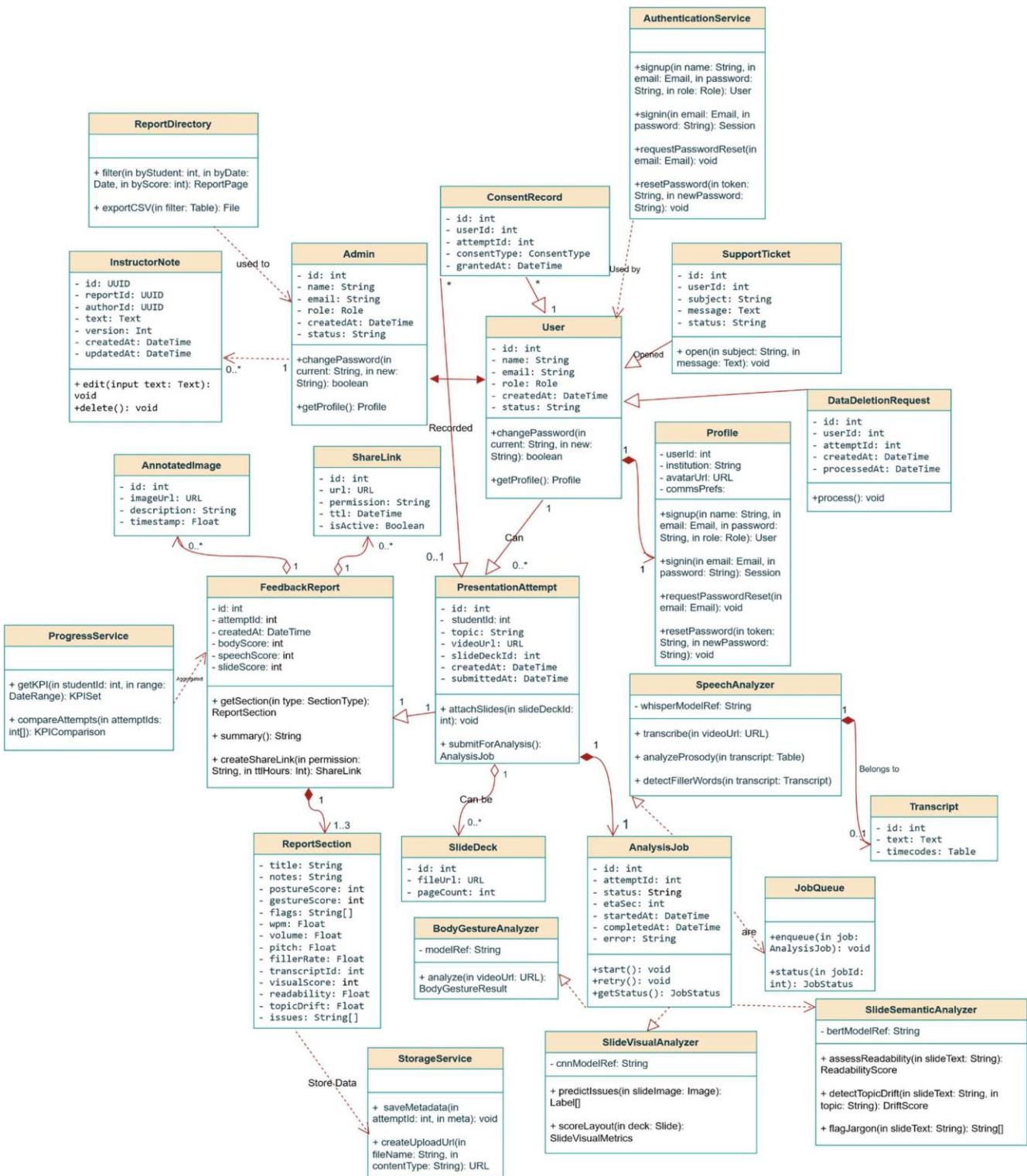
4. SOFTWARE DESIGN

4.1 System Design

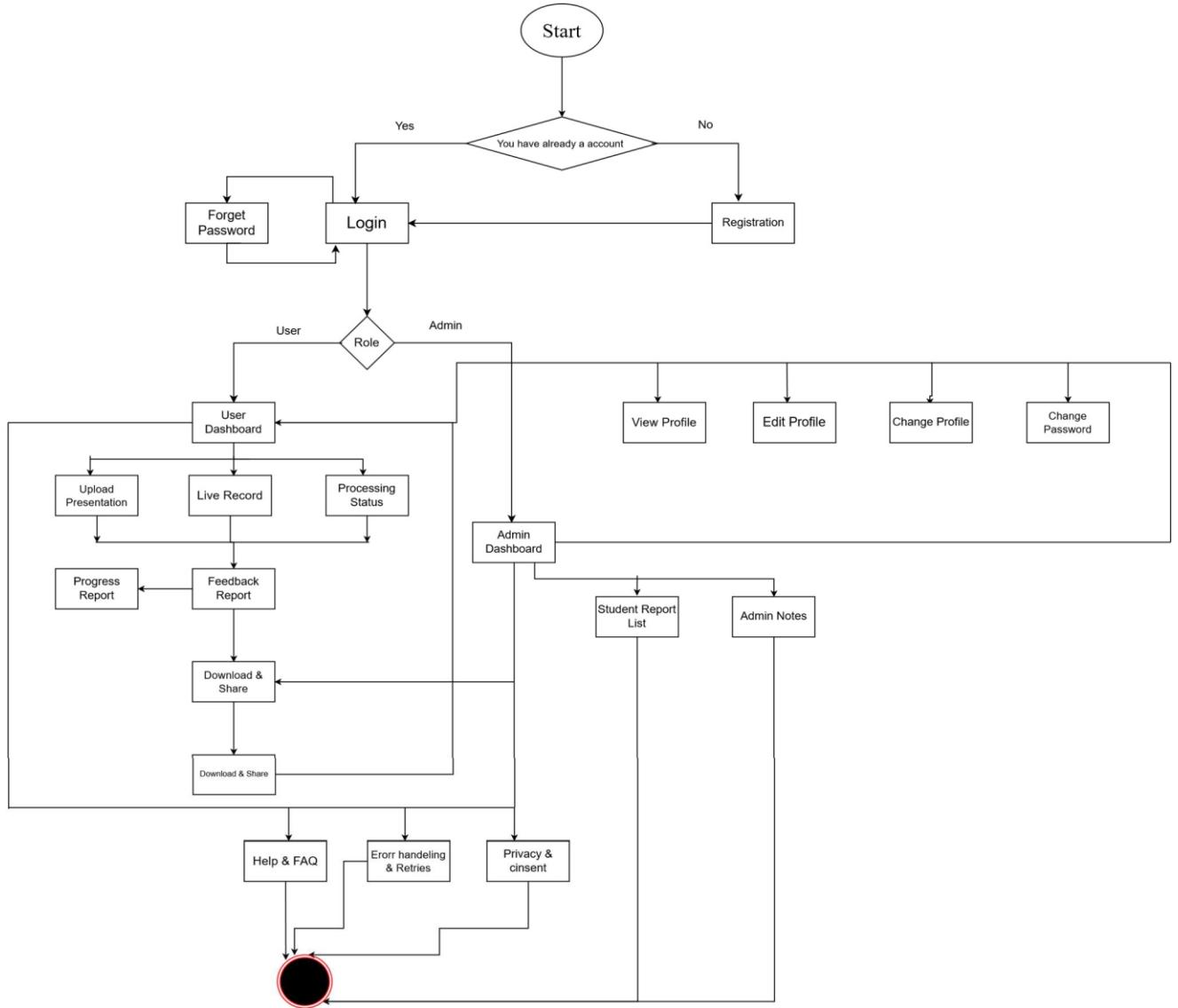
- Use Case Diagram



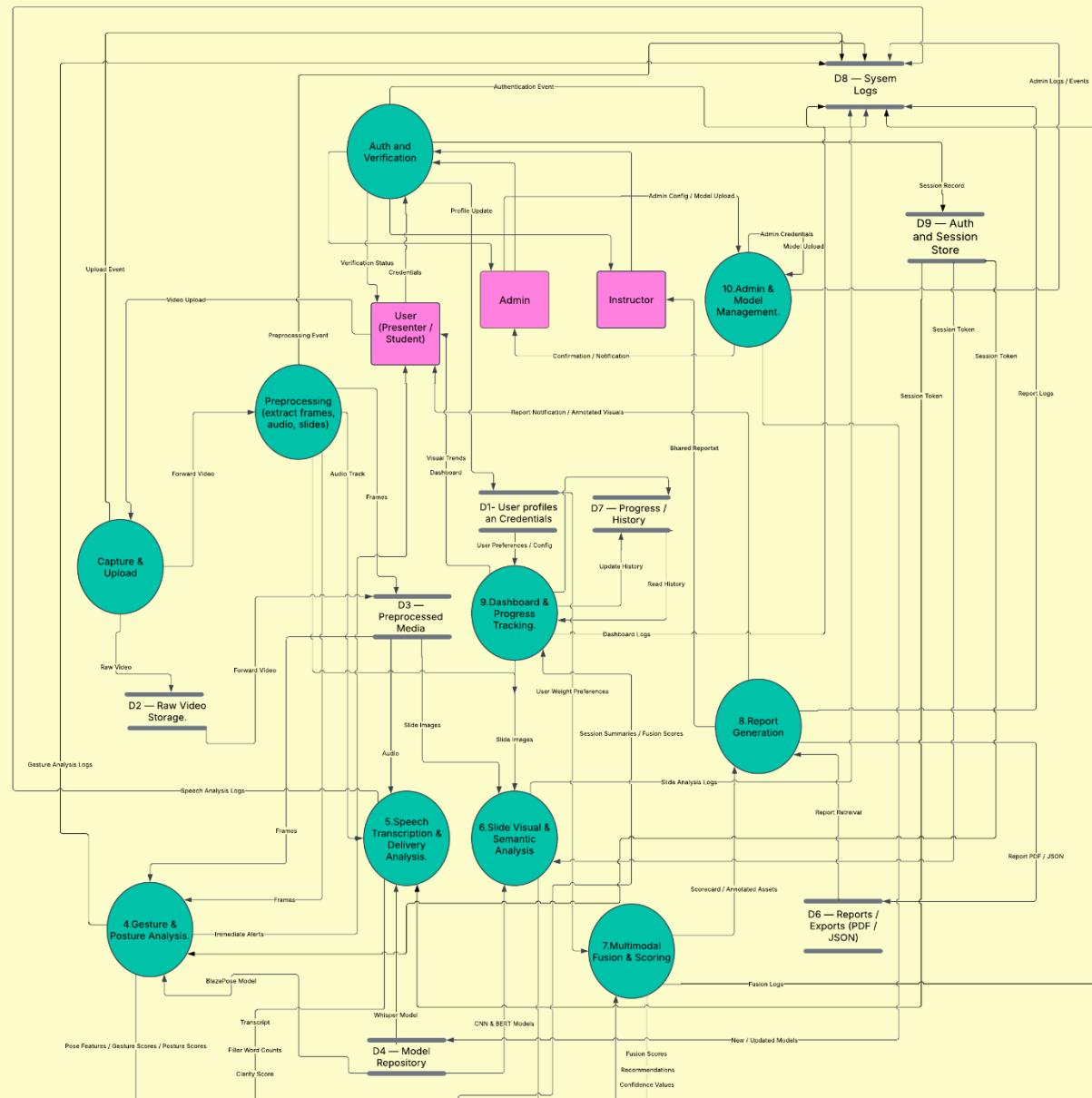
- Class Diagram



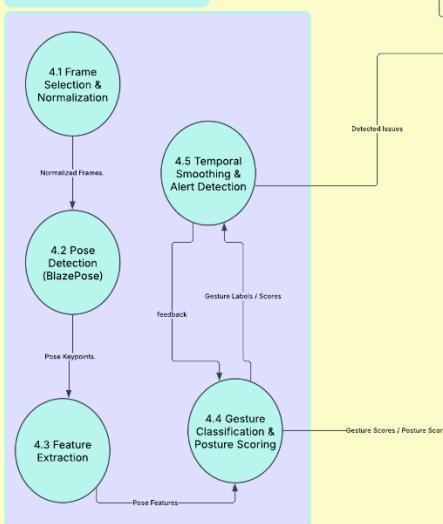
- Activity Diagram



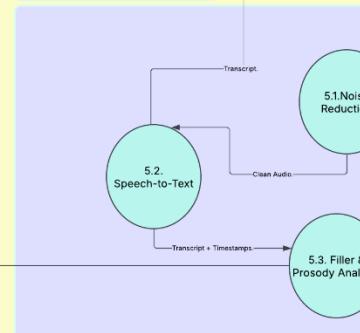
- Data Flow Diagram (DFD)



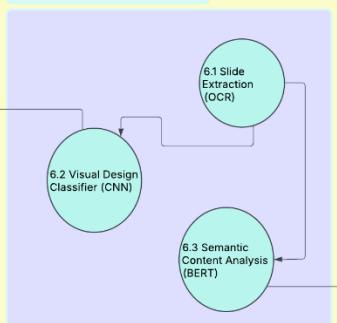
SubProcess Of Process 4



SubProcess Of Process 5



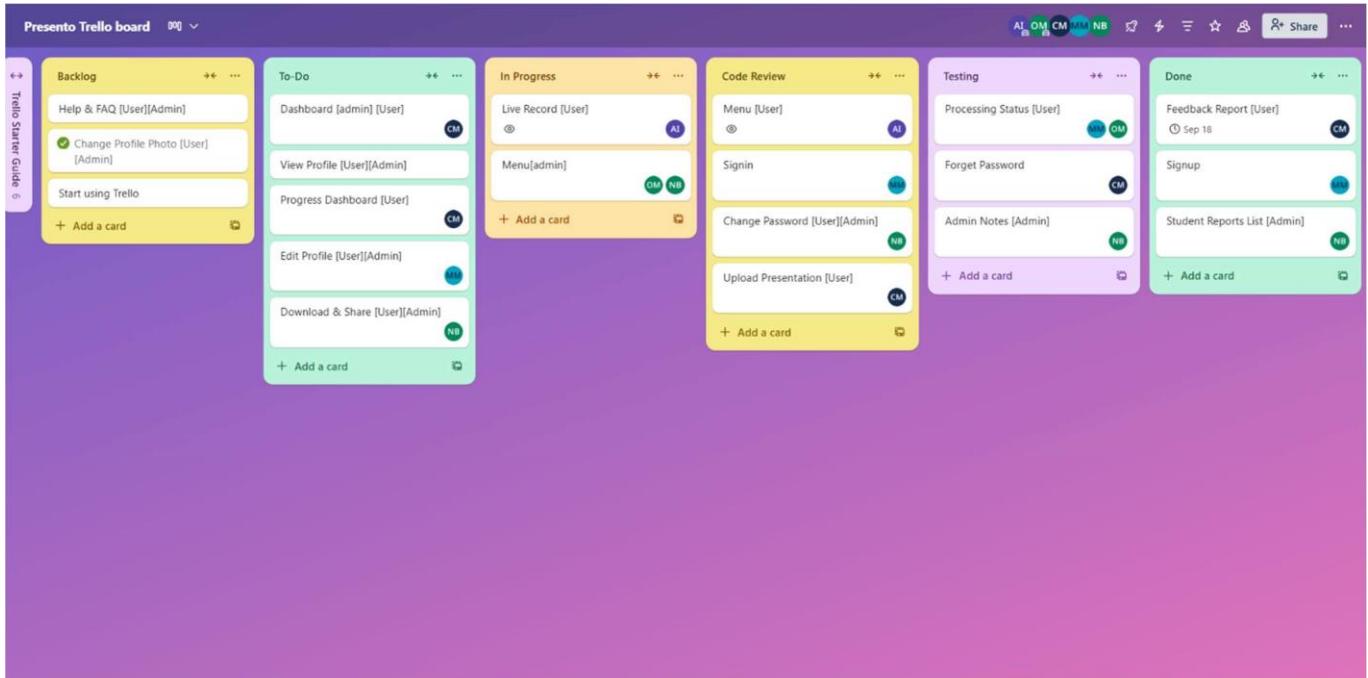
SubProcess Of Process 6



4.2 UI / Wireframe Design using Figma

1. Trello Task Board Reference

The following screenshots illustrate the Trello user board used to organize and prioritize features based on the Software Requirements Specification (SRS). Each card represents a functional requirement or user flow that was later implemented in the wireframe design.

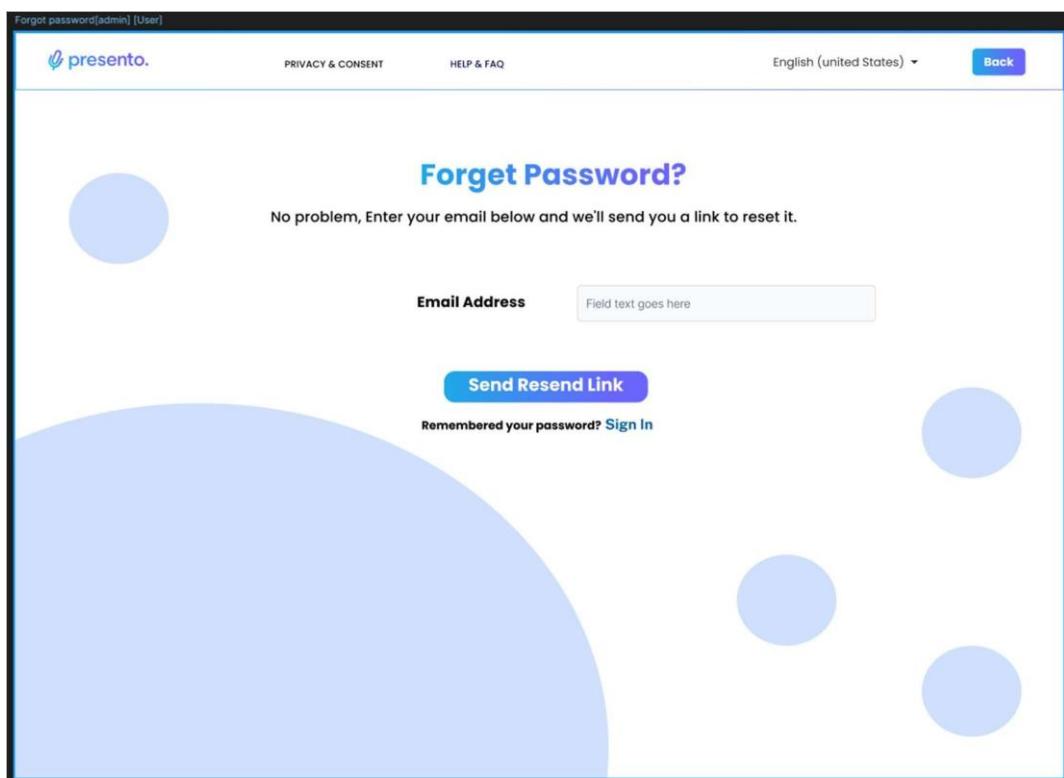
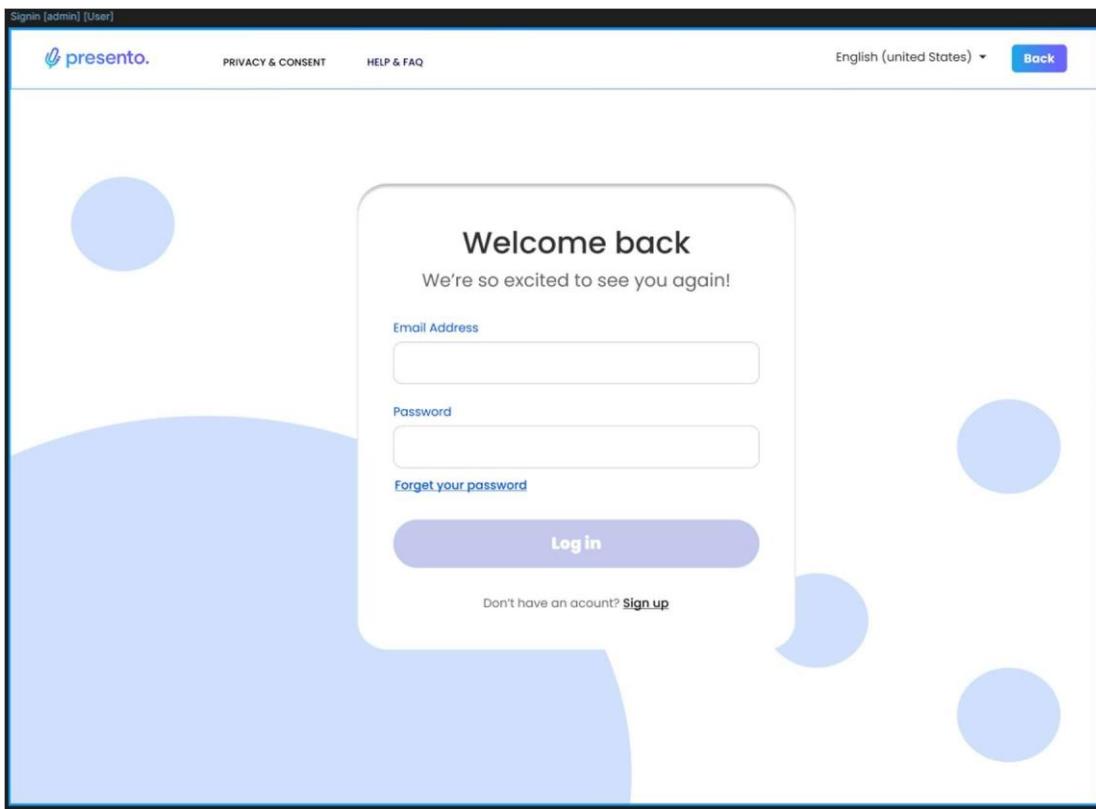


2. Figma UI Design

Feature: 1 □ Auth Feature

The wireframe for the "Create Your Account" page includes the following fields:

- Name:** Input field labeled "Field text goes here".
- Email Address:** Input field labeled "Field text goes here".
- Password:** Input field labeled "Field text goes here".
- Confirm Password:** Input field labeled "Field text goes here". Below it are password complexity rules:
 - Use 8 or more characters
 - Use upper and lower case letters (e.g. Ao)
 - Use a number (e.g. 1234)
 - Use a symbol (e.g. !@#\$)
- I am a:** A dropdown menu labeled "Select User Type".
- Sign Up:** A blue button at the bottom.
- Links:** "Already have an account? Sign In" link at the bottom.



Feature: 2 □ Navigation & Shell

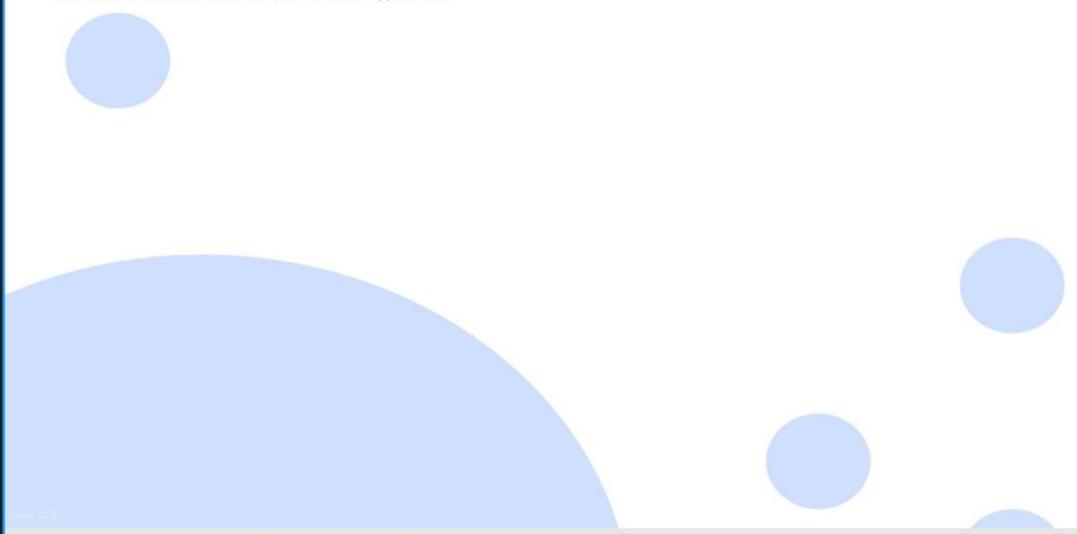
User Menu

 presento.

DASHBOARD UPLOAD REPORTS PROGRESS PROFILE HELP

Q Search English (united States) ▾ Sign Out

Page Content
The main content for the selected menu item would appear here.



Rahim Shardhar



Presento User Center
(800) CALL-GOVT info@agency.gov

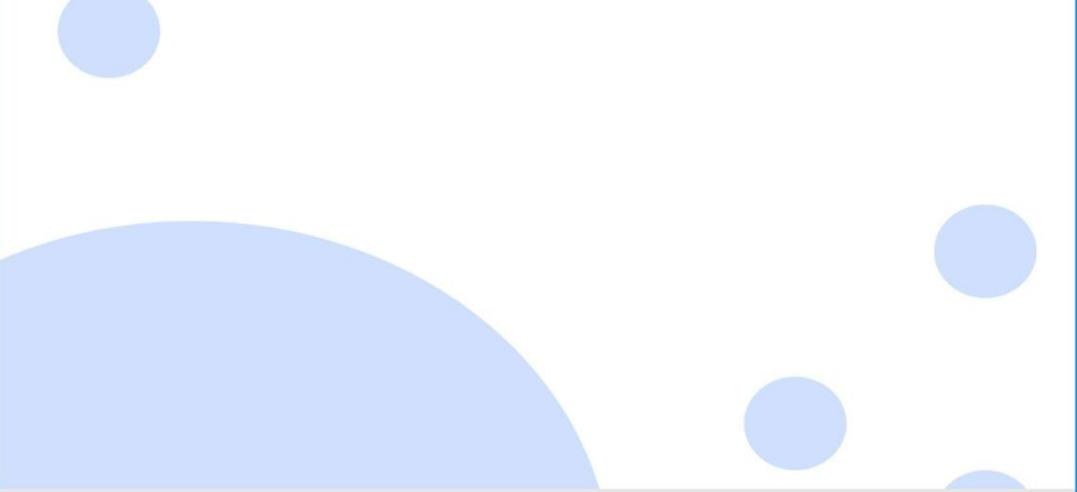
Menu[admin]

 presento.

Cohort Overview Student Report Feedback Profile

Q Search English (united States) ▾ Sign Out

Page Content
The main content for the selected menu item would appear here.



Presento Team



Presento Team Center
(800) CALL-GOVT info@agency.gov

Welcome to your Dashboard

Select an item below to navigate through the application.

Recent Uploads
See your most recent uploads and reports.

Last 5 Reports
See your last 5 reports.

Quick Actions
Click here to see more options

Status of last analysis
View your latest metrics and progress.

Feature: 3 □ Core – Upload & Capture

Live Record [User]

Live Record

Back Save

Upload Presentation (User)

 presento. DASHBOARD LIVE RECORD BODY & GESTURE ANALYSIS PROCESSING STATUS English (United States) ▾ Back Sign Out

Upload Presentation

Upload your presentation video or slides for analysis.

Drag & Drop your file here

Supported formats: MP4, MOV, PDF, PPTX, PNG. Max size: 100MB.

Browse File

UPLOAD

Details

Title (required)

Description

Reuse details

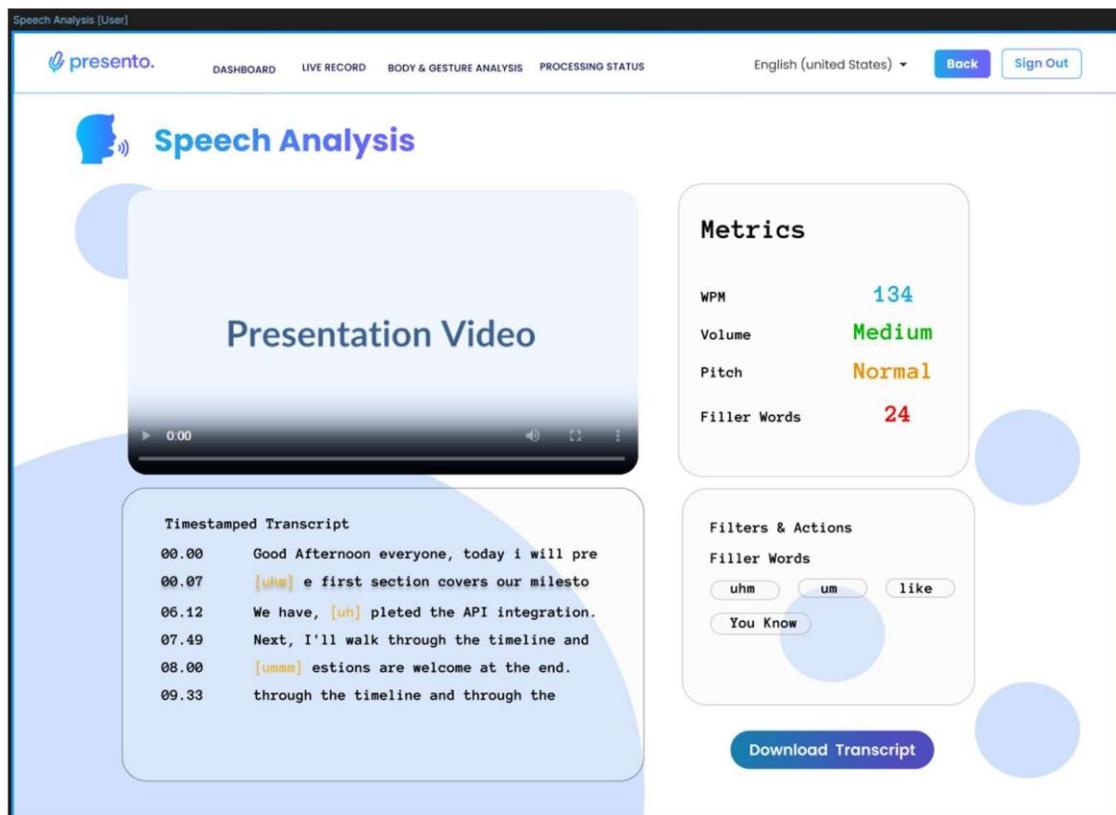
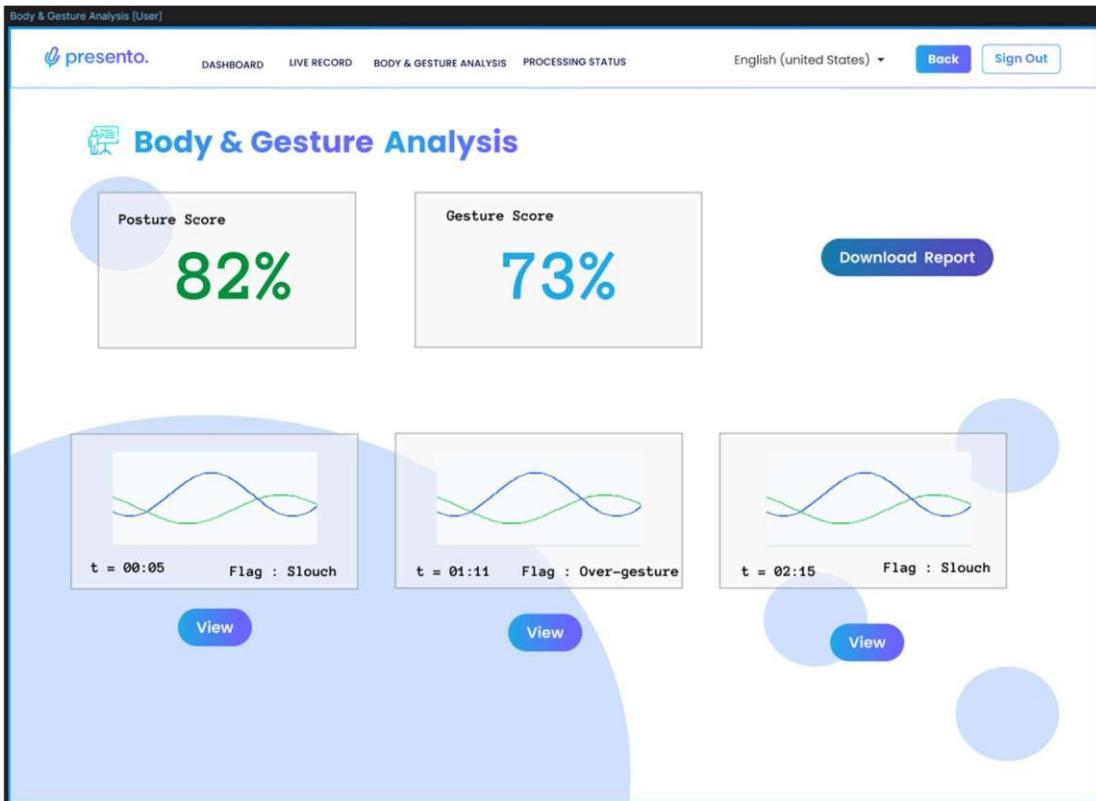
Processing Status (User)

 presento. DASHBOARD LIVE RECORD BODY & GESTURE ANALYSIS PROCESSING STATUS English (United States) ▾ Back Sign Out

Processing Status

Title	Status	Score
 Presentation Video 1	In Progress	0.0
 Presentation Video 2	Completed	5.5
 Presentation Video 3	Completed	6.7

Feature: 4 □ Multimodal Analysis (AI)



Slide Visual Quality [User]

 DASHBOARD LIVE RECORD BODY & GESTURE ANALYSIS PROCESSING STATUS English (united States) ▾ Back Sign Out

Slide Visual Quality



Browse File

Overall Score

Normalized Score: 86/100

Text Size	:	Good
Density	:	High
Contrast	:	Low

Slide 1

- Low Contrast
- Small Text

Details

Slide 2

- Low Contrast

Details

Slide 2

- Small Text

Details

Slide Semantics [User]

 DASHBOARD LIVE RECORD BODY & GESTURE ANALYSIS PROCESSING STATUS English (united States) ▾ Back Sign Out

Slide Semantics

Slide Context

Our Q2 objective is to **improve** onboarding speed and reduce This initiative is orthogonal to our blockchain **moonshot** r off-to We will adopt a synergistic paradigm I jargon ing holistic **KPIs**. Target outcome: time-to-first-value < 3 minutes for 80% of

Flagged excerpts

Off-Topic
Our Q2 objective is to **improve** onboarding speed and reduce

Jargon
Target outcome: time-to-first-value < 3 minutes for 80% of

Readability & Relevance

Readability	89%
Relevance	88/100
Off-topic Sentence	1
Jargon terms	2

Suggestions

Replace Jargon
Our Q2 objective is to **improve** onboarding speed and reduce

Remove Off-Topic
Target outcome: time-to-first-value < 3 minutes for 80% of

Feature: 5 □ Results & Reporting

Feedback Report [User]

Overall Score
72%

Category	Percentage
Pacing	17%
Eye Contact	32%
Filler Words	12%
Slide Readability	9%

Body & Gesture Analysis
Great posture and confident gestures. A few moments of slouching were detected.

Speech Delivery Analysis
Your pace was good, but you used a few filler words. Try to be more conscious of them.
"...and so, um, we can see the results here. I think, you know, this is a great opportunity. Basically, we need to move forward..."

Slide Design & Readability
Your slides are clean and visually appealing. The text is large and easy to read.

Improvement Tips

- Practice pausing instead of using filler words like "um" or "you know".
- Maintain an upright posture throughout the presentation to project confidence.

Download & Share [User][Admin]

Student Reports
Share your "Quarterly Business Review" report.

Download Report

Download PDF
Full visual report

Export CSV
Raw data metrics

Share with a link
Anyone with the link will be able to view the report.

<https://presento.ai/report/ab12-cd34-ef56> **Copy**

Admin Tools
Share with a specific student

Enter student email... **Send**

Progress Dashboard [User]

presento. DASHBOARD UPLOAD SETTINGS HELP & FAQ English (United States) Back Sign Out

Progress Dashboard

Welcome back, Abtahi..!

Avg. Overall Score	Improvement	Filler Words / Min	Gesture Score
84	+12%	1.2	92

Recent Presentations

Presentation Title	Date	Overall Score	View Report
Quarterly Business Review	Aug 23, 2025	82/100	View
Project Alpha Update	Aug 20, 2025	72/100	View
Initial Proposal	Aug 11, 2025	88/100	View

Feature: 6 □ Profile & Account

View Profile [User][Admin]

presento. Profile Edit Photo Security Back Sign Out

Account Dashboard

Manage your profile and account settings

Niloy Bhuiyann

[Edit](#) [View August 2025](#)

Add a bio to tell others about yourself!

Activity Overview

- Total Attempts: 0 Activities completed
- Reports Generated: 0 Documents created
- Member Since: Aug 2025 Account created
- Account Status: Active Security verified

Personal Information

- Email Address: ni...-*.-@gmail.com [Edit](#)
- Phone Number: Add your phone number [Edit](#)
- Location: Add your location [Edit](#)
- Company: Add your company [Edit](#)
- Website: Add your website [Edit](#)

Ready to customize your profile?

Use the tabs above to edit your information, upload a photo, or update your security settings.

[Edit Profile](#) [Upload Photo](#) [Update Security](#)

Edit Profile [User][Admin]

presento. Profile Edit Photo Security Back Sign Out

Account Dashboard

Manage your profile and account settings

Edit Profile

Update your personal information

Full Name: Niloy Bhuiyan

Phone Number: +880 1234567891

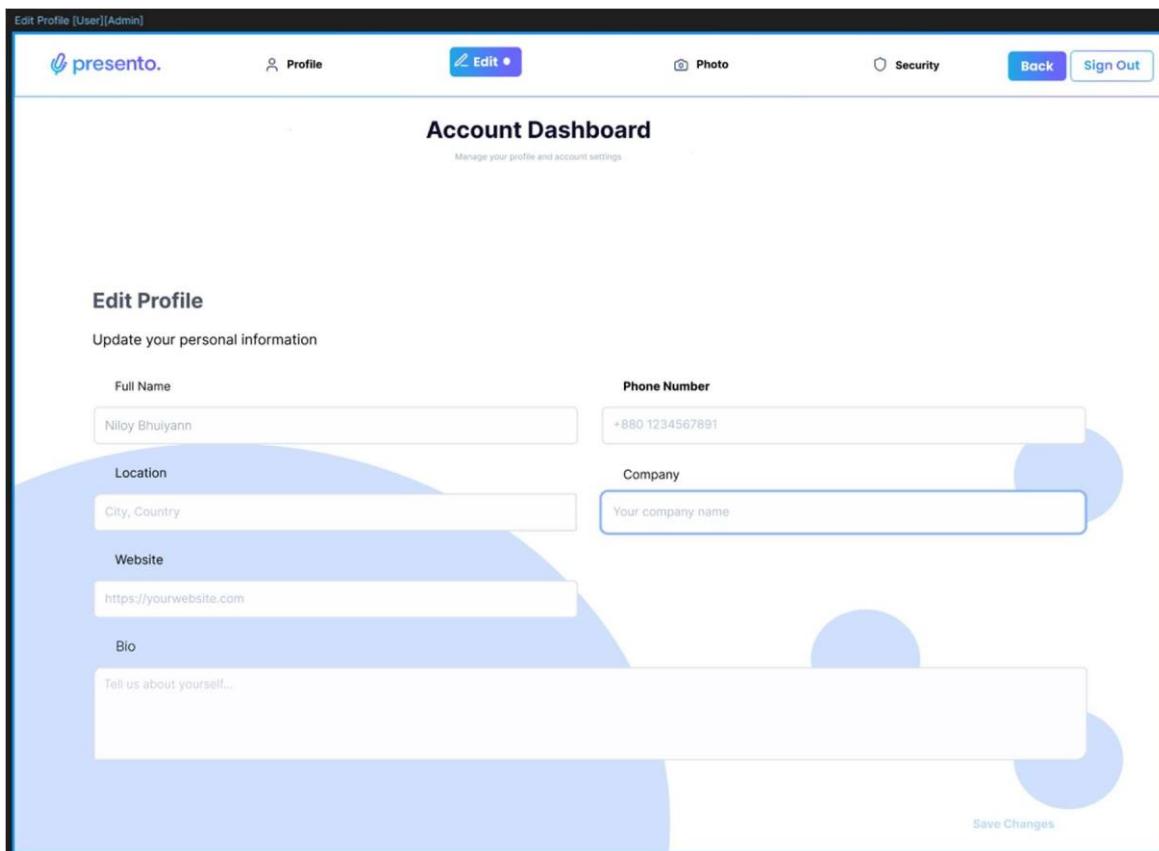
Location: City, Country

Company: Your company name

Website: <https://yourwebsite.com>

Bio: Tell us about yourself....

Save Changes



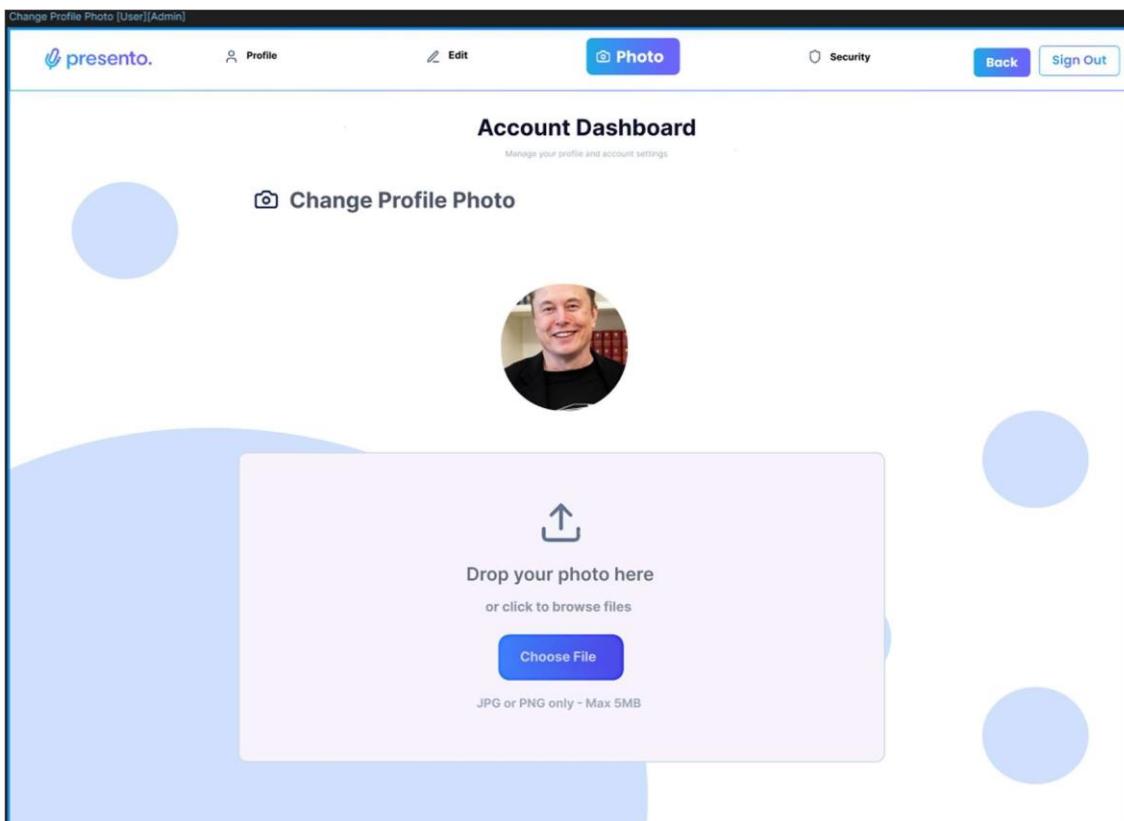
Change Profile Photo [User][Admin]

presento. Profile Edit Photo Security Back Sign Out

Account Dashboard

Manage your profile and account settings

Change Profile Photo



Drop your photo here
or click to browse files

Choose File

JPG or PNG only - Max 5MB

Change Password [User][Admin]

    Security Back Sign Out

Account Dashboard

Manage your profile and account settings.

Current Password: hmjbv

New Password:

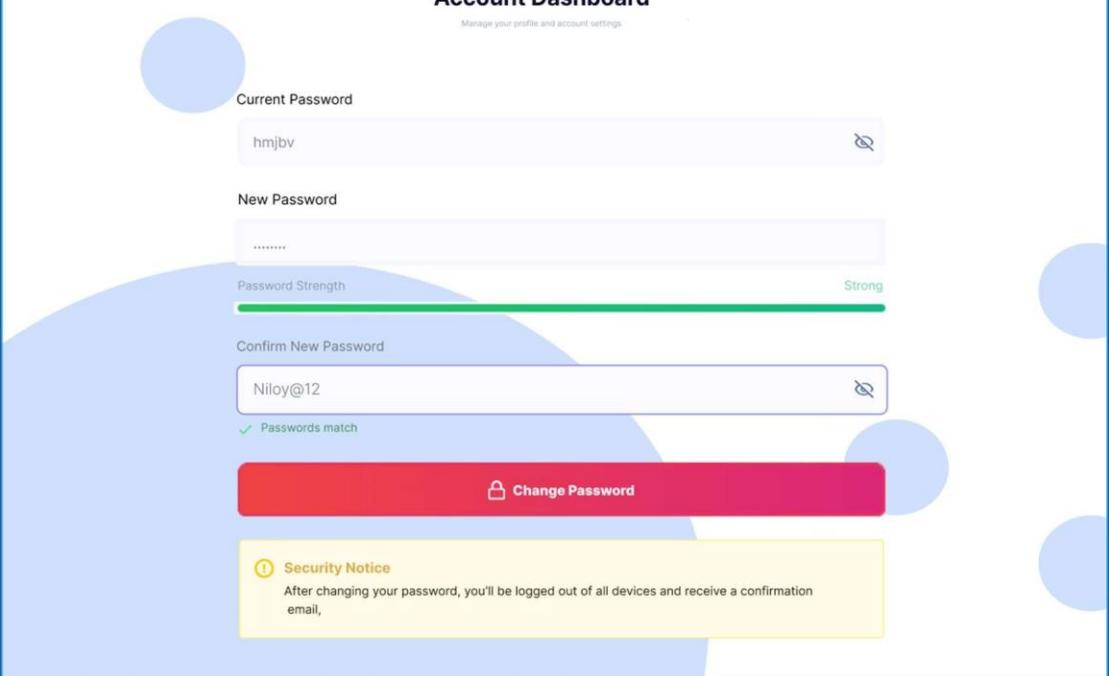
Password Strength: Strong

Confirm New Password: Niloy@12

✓ Passwords match

 Change Password

 **Security Notice**
After changing your password, you'll be logged out of all devices and receive a confirmation email,



Feature: 7 Admin Dashboard

Student Reports List [Admin]

 DASHBOARD SETTINGS HELP & FAQ English (united States) Back Sign Out

Student Reports

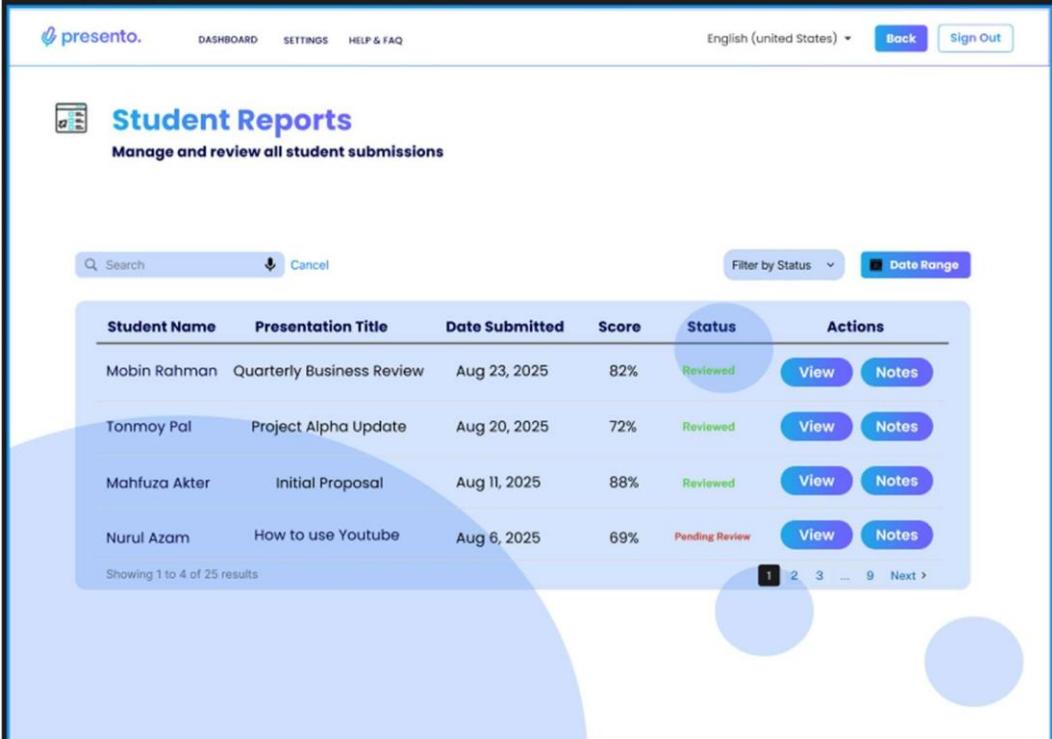
Manage and review all student submissions

Search Cancel Filter by Status Date Range

Student Name	Presentation Title	Date Submitted	Score	Status	Actions
Mobin Rahman	Quarterly Business Review	Aug 23, 2025	82%	Reviewed	 
Tonmoy Pal	Project Alpha Update	Aug 20, 2025	72%	Reviewed	 
Mahfuza Akter	Initial Proposal	Aug 11, 2025	88%	Reviewed	 
Nurul Azam	How to use Youtube	Aug 6, 2025	69%	Pending Review	 

Showing 1 to 4 of 25 results

1 2 3 ... 9 Next >



Admin Notes [Admin]

DASHBOARD UPLOAD SETTINGS HELP & FAQ English (United States) Back Sign Out

Admin Notes

For "Quarterly Business Review" by Abtahi Islam

Add New Note

Posted Notes (2)

Madison Cooper ★★★★★ Aug 16, 2025 at 10:30 AM

Exceptional work on this presentation. Your delivery was outstanding. I was particularly impressed with your confident posture and the way you used vocal variety to keep the content engaging from start to finish. The pacing was perfect, allowing every point to land effectively. Your slides were clean, visually appealing, and perfectly complemented your speech instead of distracting from it. This is a benchmark performance. For your next presentation, I challenge you to experiment with incorporating a brief interactive element, like a poll or a question, to further engage the audience. Keep up the fantastic work!

Madison Cooper ★☆☆☆☆ Aug 15, 2025 at 4:15 PM (Edited)

Thank you for your submission. This presentation is a good first step, but there are several key areas we need to work on. The AI feedback correctly highlighted that the pacing was quite fast, which made some of your points difficult to follow. I also noticed a high number of filler words, which can detract from your credibility. Let's focus on slowing down your speech and pausing intentionally between sentences. Additionally, your slides were quite text-heavy. For your next attempt, try to simplify each slide to one core idea. I'm confident that with practice, we can significantly improve your next score.

Feature: 8 □ Help & Reliability

Help & FAQ [User][Admin]

PRIVACY & CONSENT HELP & FAQ English (United States) Back

How can we help?

Find answers to common questions, or reach out to our support team for personalized assistance.

Search Cancel

Frequently Asked Questions

- What Video Format are supported for upload?
- What is the maximum video or document size?
- What is the maximum video or document size?
- Can i share my feedback report?
- How do i delete my account?
- How do i delete my data?

Still have questions?

Our support team is here to help. Please fill out the form below.

Your Name Field text goes here

Your Email Field text goes here

Message Field text goes here

Submit Ticket

Error Handling & Retries [User][Admin]

presento.

DASHBOARD HELP & FAQ PRIVACY & CONSENT English (United States) Back Sign Out

File Upload

This page demonstrates different error states and recovery options.

Scenario: Network Error



Retry Upload

Scenario: Invalid File Format

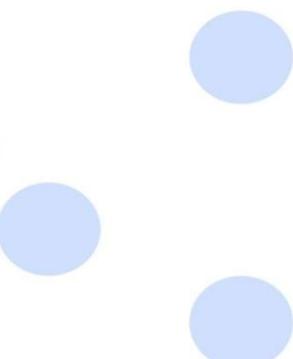


Upload a Different File

Scenario: Server Processing Error



Retry Analysis **Contact Support**



Privacy & Consent [User][Admin]

presento.

DASHBOARD HELP & FAQ PRIVACY & CONSENT English (United States) Back Sign Out

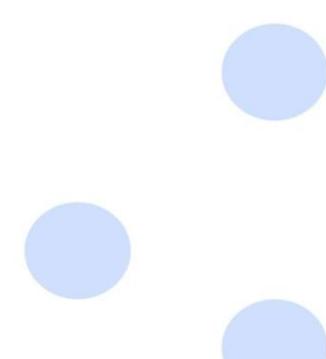
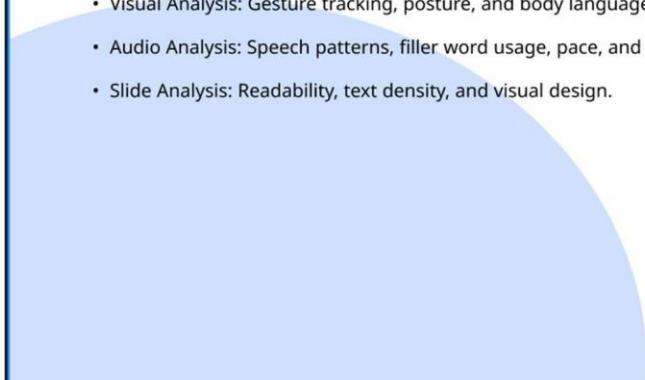
Your Privacy, Your Control

Before we can analyze your presentation, we need your consent to process your video and audio data. We are committed to protecting your privacy and handling your data responsibly.

Data Processing Consent

To provide you with feedback on your presentation, our AI will analyze the following aspects of your uploaded video:

- Visual Analysis: Gesture tracking, posture, and body language.
- Audio Analysis: Speech patterns, filler word usage, pace, and tone.
- Slide Analysis: Readability, text density, and visual design.



5. GIT WORKFLOW

Contributor 1: NURUL AZAM BHUIYAN

The image consists of three vertically stacked screenshots of the Atlassian Bitbucket web interface.

Screenshot 1: Repository Overview

This screenshot shows the repository details for "Presento". It includes:

- Branches: master (selected), 7 Branches, 0 Tags
- Commits: 7 Commits (last commit was yesterday)
- Files: README, Lit, Mid, DCom-Assessment-Final Term_Summer-2024..., Estimation Of Presentatio...
- Contributors: Nurul Azam Bhuiyan
- Languages: C++ 100.0%

Screenshot 2: Branches

This screenshot displays the list of branches:

- Default branch: master (updated 2 hours ago)
- Your branches: Nurul-Azam-Bhuiyan (updated 2 hours ago)
- Active branches: Nurul-Azam-Bhuiyan, Tomay-Pall, Manjula-Akter, Diana-Molla-Tuhin (all updated within the last 11 hours)

Screenshot 3: Issues

This screenshot shows the list of issues:

- Open issues: Help & FAQ [User/Admin] (opened 8 hours ago), New Lab Task (opened 11 hours ago), Upload presentation UI (opened 11 hours ago), Global navigation & routing (RBAC) (opened 11 hours ago), Auth frontend (forms, validation, flows) (opened yesterday), dashboard (opened yesterday), resetpassword (opened yesterday), signup (opened yesterday), sign-in (opened yesterday).

Contributor 2: ABTAHI ISLAM

This screenshot shows the GitHub repository 'Presento'. The repository has 7 branches and 0 tags. The commit history includes:

- master: first commit by Niloy Bhuiyan, yesterday
- Lab: first commit by Niloy Bhuiyan, yesterday
- Mid: first commit by Mahfuzza, 8 hours ago
- DCom-Assignment-Final Term_Summer-2024-: Mahfuzza, 8 hours ago
- Estimation Of Presento: Nurul Azam Bhuiyan, 2 hours ago
- Figma Important Links.txt: first commit by Niloy Bhuiyan, yesterday
- README.md: Create README.md by Nurul Azam Bhuiyan, 2 hours ago
- Test Case Template.docx: Osama Mobin Zuhar, 11 hours ago
- string.cpp: Tommcy the boss, 8 hours ago
- test: Create test by Tommcy the boss, 8 hours ago

The repository has 7 commits in total. It also includes sections for About, Releases, Packages, Contributors, and Languages.

This screenshot shows the 'Branches' page in GitHub. It lists the following active branches:

Branch	Updated	Check status	Behind / Ahead	Pull request
Nurul-Azam-Bhuiyan	2 hours ago	0 / 0	0 / 0	...
Tommcy-Pall	8 hours ago	3 / 0	0 / 0	...
Mahfuzza-witter	8 hours ago	3 / 0	0 / 0	...
Osama-Mobin-Zuhar	11 hours ago	5 / 0	0 / 0	...
Testing	yesterday	0 / 0	0 / 0	...
development	yesterday	6 / 0	0 / 0	...

This screenshot shows the 'Presento' project board in Asana. The backlog section includes:

- Abtahi360: 1 task
- mahfuzmaMou71: 2 tasks
- Niloy-Bhuiyan: 1 task
- tonmoypall: 2 tasks

The tasks listed in the backlog are:

Title	Status	Size	Estimate	Iteration	Start date
Global navigation & routing (RBAC) #6	In Progress				
Upload presentation UI #7	In Progress				
Auth frontend (forms, validation, flows) #5	To Do				
dashboard #4	To Do				
Help & FAQ [User][Admin] #9	To Do				

The backlog also includes an 'Add item' button.

Contributor 3: TONMOY PAL

This screenshot shows the GitHub repository 'Abtahi360 / Presento'. The repository has 7 branches and 0 tags. The 'master' branch is selected. The repository has 7 commits from 'Niloy-Bhulyan' and 'Tonmoy-Pal'. The 'README' file is visible at the bottom.

Author	Commit Message	Date
Niloy-Bhulyan	first commit	yesterday
Niloy-Bhulyan	first commit	yesterday
Niloy-Bhulyan	Mahfuz	7 hours ago
Niloy-Bhulyan	Nurul Azam Bhulyan	1 hour ago
Niloy-Bhulyan	first commit	yesterday
Niloy-Bhulyan	Create README.md	10 hours ago
Niloy-Bhulyan	Test Case Template.docx	10 hours ago
Niloy-Bhulyan	string.cpp	7 hours ago
Niloy-Bhulyan	Tonmoy the boss	7 hours ago
Niloy-Bhulyan	Create test	7 hours ago

This screenshot shows the GitHub repository 'Abtahi360 / Presento'. The 'Branches' tab is selected. There are 6 branches listed: 'Nurul-Azam-Bhulyan', 'Tonmoy-Pal', 'Mahfuz-Akter', 'Osama-Momin-Zuhar', 'Testing', and 'development'. The 'Tonmoy-Pal' branch is currently active.

Branch	Updated	Check status	Behind	Ahead	Pull request
Nurul-Azam-Bhulyan	1 hour ago	0 0	0	0	...
Tonmoy-Pal	7 hours ago	3 0	3	0	...
Mahfuz-Akter	7 hours ago	3 0	3	0	...
Osama-Momin-Zuhar	10 hours ago	5 0	5	0	...
Testing	yesterday	6 0	6	0	...
development	yesterday	6 0	6	0	...

This screenshot shows the GitHub repository 'Abtahi360 / Presento'. The 'Issues' tab is selected. There are 9 open issues. The issues are: 'Help & FAQ [User][Admin]', 'New Lab Task', 'Upload presentation UI', 'Global navigation & routing (RBAC)', 'Auth frontend (forms, validation, flows)', 'dashboard', 'resetpassword', 'signup', and 'signin'. The 'Help & FAQ [User][Admin]' issue was opened by 'Abtahi360' 7 hours ago.

Issue	Author	Labels	Projects	Milestones	Assignees	Created
Help & FAQ [User][Admin]	#9 - Abtahi360					opened 7 hours ago
New Lab Task	#10 - Chayanmon					opened 10 hours ago
Upload presentation UI	#7 - Abtahi360					opened yesterday
Global navigation & routing (RBAC)	#6 - Abtahi360					opened yesterday
Auth frontend (forms, validation, flows)	#5 - Abtahi360					opened yesterday
dashboard	#4 - Abtahi360					opened yesterday
resetpassword	#3 - Abtahi360					opened yesterday
signup	#2 - Abtahi360					opened yesterday
signin	#1 - Abtahi360					opened yesterday

Contributor 4: OSAMA MOBIN ZUHAR

The image displays three screenshots of the GitHub repository 'Abtahi360/Presento'.

Screenshot 1: Repository Overview

- Code:** Shows the 'master' branch with 7 branches and 0 tags. Recent commits include 'Niloy-Bhuiyan' (first commit), 'Mahfuzza' (first commit), 'Estimation Of Presento.docx' (Nurul Azam Bhuiyan), 'Figma Important Links.txt' (first commit), 'README.md' (Create README.md), 'Test Case Template.docx' (Osama Mobin Zuhar), 'string.cpp' (Tonmoy the boss), 'test' (Create test), and 'README'.
- About:** No description, website, or topics provided.
- Readme:** Contains links to 'Lab', 'Mid', 'DCom-Assignment-Final Term_Summer-2024...', 'Estimation Of Presento.docx', 'Figma Important Links.txt', 'README.md', 'Test Case Template.docx', 'string.cpp', and 'test'.
- Activity:** 7 commits by Niloy-Bhuiyan, Mahfuzza, Nurul Azam Bhuiyan, Osama Mobin Zuhar, and Tonmoy the boss.
- Releases:** No releases published. [Create a new release](#).
- Packages:** No packages published. [Publish your first package](#).
- Contributors:** 5 contributors: Niloy-Bhuiyan, Mahfuzza, Nurul Azam Bhuiyan, Osama Mobin Zuhar, and Tonmoy the boss.

Screenshot 2: Issues

- Issues:** 9 open issues. Recent issues include:
 - Help & FAQ [User][Admin] (#3 - Abtahi360 opened 7 hours ago)
 - New Lab Task (#8 - Osamamobin opened 10 hours ago)
 - Upload presentation UI (#7 - Abtahi360 opened yesterday)
 - Global navigation & routing (RBAC) (#6 - Abtahi360 opened yesterday)
 - Auth frontend (forms, validation, flows) (#5 - Abtahi360 opened yesterday)
 - dashboard (#4 - Abtahi360 opened yesterday)
 - resetpassword (#3 - Abtahi360 opened yesterday)

Screenshot 3: Branches

- Branches:** Active branches: Nuru1-Azam Bhuiyan, Tonmoy-Pal, Mahfuzza-Akter, Osama-Mobin-Zuhar, Testing, and development.
- Overview:** Shows the status of each branch relative to the master branch.

Branch	Updated	Check status	Behind	Ahead	Pull request
Nuru1-Azam Bhuiyan	1 hour ago	Green	0	0	...
Tonmoy-Pal	7 hours ago	Yellow	3	0	...
Mahfuzza-Akter	7 hours ago	Yellow	3	0	...
Osama-Mobin-Zuhar	10 hours ago	Blue	5	0	...
Testing	yesterday	Green	6	0	...
development	yesterday	Green	6	0	...

Contributor 5: MOST. MAHFUZA AKTER

The image displays three screenshots of a GitHub repository named 'Abtahi360/Presento'.
1. **Code Section**: Shows the 'master' branch with 7 commits. The commits are listed as follows:

- Lab (first commit, yesterday)
- Mid (first commit, yesterday)
- DXCom-Assignment-Final Term, Summer-2024-... (Mahfuz, 7 hours ago)
- Estimation Of Presento.docx (Nurul Azam Bhuiyan, 1 hour ago)
- Figma Important Links.txt (first commit, yesterday)
- README.md (Create README.md, 10 hours ago)
- Test Case Template.docx (Osama Mobin Zubar, 10 hours ago)
- string.cpp (Tanjiraj the boss, 7 hours ago)
- test (Create test, 7 hours ago)

A 'README' file is also present.
2. **Issues Section**: Shows 9 open issues. The issues are:

- Help & FAQ [User][Admin] (#9 - Abtahi360 opened 6 hours ago)
- New Lab Task (#8 - Osamamobin opened 9 hours ago)
- Upload presentation UI (#7 - Abtahi360 opened yesterday)
- Global navigation & routing (RBAC) (#6 - Abtahi360 opened yesterday)
- Auth frontend (forms, validation, flows) (#5 - Abtahi360 opened yesterday)
- dashboard (#4 - Abtahi360 opened yesterday)
- resetpassword (#3 - Abtahi360 opened yesterday)
- signup (#2 - Abtahi360 opened yesterday)

3. **Branches Section**: Shows the repository's branches. The branches are:

- Default: master (Updated 2 hours ago, Check status: Default, Behind/Ahead: 0/0)
- Your branches: Nurul-Azam-Bhuiyan (Updated 2 hours ago, Check status: 0/0, Behind/Ahead: 0/0)
- Active branches:
 - Nurul-Azam-Bhuiyan (Updated 2 hours ago, Check status: 0/0, Behind/Ahead: 0/0)
 - Tanvir-MZ (Updated 8 hours ago, Check status: 2/0, Behind/Ahead: 2/0)
 - Mahfuz-AKTER (Updated 8 hours ago, Check status: 2/0, Behind/Ahead: 2/0)
 - Osama-Mobin-Zubar (Updated 11 hours ago, Check status: 5/0, Behind/Ahead: 5/0)
 - Untracked (Updated 4 hours ago, Check status: 4/0, Behind/Ahead: 4/0)

6. TESTING

Project Name: Presento	Test Designed By: ABTAHI ISLAM							
Test Case ID: TC_01	Test Designed Date: 09/15/2025							
Test Priority (Low, Medium, High): High	Test Executed by: ABTAHI ISLAM							
Module Name: Signup	Test Execution date: (TBD)							
Test Title: Verify signup with valid details								
Description: Verify a new user can register successfully with valid inputs and receives verification email.								
Precondition: No existing account with the test email.								
Dependencies: None								
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)				
1. Go to the website and navigate to Signup page. 2. Enter Name 3. Enter Email 4. Enter Password 5. Re-enter Password 6. Select User Type 7. Click Signup.	1. Enter Name = "Test Student". 2. Enter Email = "student.test@example.com". 3. Enter Password = "StrongPass!23". 4. Re-enter Password = "StrongPass!23". 5. Select User Type = "Student".	Account is created, user is redirected to dashboard, verification email is sent and success message displayed.	As expected	Pass				

Project Name: Presento	Test Designed By: ABTAHI							
Test Case ID: TC_2	Test Designed Date: 09/15/2025							
Test Priority (Low, Medium, High): High	Test Executed by: ABTAHI							
Module Name: Signup	Test Execution date: (TBD)							
Test Title: Check signup with an already-registered email shows error								
Description: Ensure duplicate email is rejected with appropriate message.								
Precondition: An account with existing@example.com exists.								
Dependencies: TC_01								
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)				
1. Open Signup page. 2. Enter Name and Email 3. Fill other fields with valid data. 4. Click Signup.	1. Enter Name = "Test Student". 2. Email = existing@example.com.	Error shown: "email already used" (or similar).	Signup rejected.	Fail				

Project Name: Presento	Test Designed By: ABTAHI			
Test Case ID: TC_03	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): High	Test Executed by: ABTAHI			
Module Name: Signin	Test Execution date: (TBD)			
Test Title: Verify login with valid credentials				
Description: Verify user can login with correct email/password and lands on dashboard.				
Precondition: Account exists and email is verified.				
Dependencies: TC_01				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
<ol style="list-style-type: none"> 1. Go to the website and navigate to Signup page. 2. Enter Email and Password for the test account. 3. Click Sign in. 	<ol style="list-style-type: none"> 1. Email = student.test@example.com, 2. Password = StrongPass!23. 	Redirect to dashboard	As expected	Pass

Project Name: Presento	Test Designed By: ABTAHI			
Test Case ID: TC_04	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): Medium	Test Executed by: ABTAHI			
Module Name: Signin	Test Execution date: (TBD)			
Test Title: Login with invalid credentials shows error				
Description: Login with invalid credentials shows error				
Precondition: Account exists				
Dependencies: TC_03				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
<ol style="list-style-type: none"> 1. Open Signin page. 2. Enter valid email and wrong password. 3. Click Sign in. 	<ol style="list-style-type: none"> 1. Email = student.test@example.com, 2. Password = WrongPass. 	Error shown: “invalid credentials”	no redirect	Fail

Project Name: Presento	Test Designed By: Osama Mobin
Test Case ID: TC_05	Test Designed Date: 09/15/2025
Test Priority (Low, Medium, High): Medium	Test Executed by: Osama Mobin
Module Name: Forgot Password	Test Execution date: (TBD)
Test Title: Verify reset password flow sends reset link	
Description: Ensure password reset link is emailed and token expires per policy.	

Precondition: Account exists.				
Dependencies: TC_03				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
<ol style="list-style-type: none"> 1. Go to Forgot Password page. 2. Enter account email. 3. Click Send reset link. 4. Open email and click link. 5. Reset password. 	Email = student.test@example.com.	Reset email received; token valid within expiry (e.g., 2h); password reset successful;	Successfully sends reset link	Pass

Project Name: Presento	Test Designed By: Osama Mobin			
Test Case ID: TC_06	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): High	Test Executed by: Osama Mobin			
Module Name: Upload Presentation	Test Execution date: (TBD)			
Test Title: Upload valid presentation video (.mp4) and optional slides (.pdf)				
Description: Verify upload flow, progress bar, and successful metadata submission creating a PresentationAttempt and queueing job.				
Precondition: User is logged in				
Dependencies: TC_03				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
<ol style="list-style-type: none"> 1. Go to Upload page. 2. Drag & drop a 3-min .mp4 file and attach a .pdf slide deck. 3. Fill topic field. 4. Click Submit for analysis. 	presentation.mp4 (3 min), slides.pdf.	Progress updates during upload, upload completes, Presentation Attempt created in DB.	As expected	Pass

Project Name: Presento	Test Designed By: Osama Mobin
Test Case ID: TC_07	Test Designed Date: 09/15/2025
Test Priority (Low, Medium, High): Medium	Test Executed by: (TBD)
Module Name: Upload Presentation	Test Execution date: 09/15/2025
Test Title: Upload invalid file type shows error	
Description: Verify unsupported formats are rejected.	
Precondition: User logged in	
Dependencies: TC_06	

Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Upload a .exe or .txt file via Upload page. 2. Click Submit.	malicious.exe.	Error displayed: “unsupported file type”.	upload prevented	Fail

Project Name: Presento	Test Designed By: Osama Mobin			
Test Case ID: TC_08	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): High	Test Executed by: Osama Mobin			
Module Name: Live Record	Test Execution date: (TBD)			
Test Title: Verify live recording and permission flow (webcam + mic)				
Description: Verify browser permissions requested, recording saved, and live-to-draft flow.				
Precondition: User logged in; browser supports media APIs.				
Dependencies: TC_03				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to Live Record page. 2. Click Start recording, grant camera & mic permissions. 3. Pause/resume, then Stop. 4. Save as draft.	N/A (live recording)	Permission prompt shown; recording starts only after permission; audio/video in sync; draft stored in user queue.	As expected	Pass

Project Name: Presento	Test Designed By: Tonmoy			
Test Case ID: TC_09	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): High	Test Executed by: Tonmoy			
Module Name: Processing Status	Test Execution date: (TBD)			
Test Title: Verify Processing Status transitions (Queued → Analyzing → Complete) with ETA and retry				
Description: Confirm job lifecycle updates and retry option works after transient failure.				
Precondition: An analysis job exists (from TC_06).				
Dependencies: TC_06				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. After submitting, open Processing Status page.	Job ID from TC_06	Status moves from Queued to Analyzing to Complete; ETA displayed; if worker fails, retry	As expected	Pass

2. Observe statuses and ETA. 3. Simulate worker failure (if test environment supports) and click Retry.		option re-enqueues job and job completes after retry.		
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Project Name: Presento	Test Designed By: Tonmoy			
Test Case ID: TC_10	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): High	Test Executed by: Tonmoy			
Module Name: Body & Gesture Analysis	Test Execution date: (TBD)			
Test Title: Validate body posture & gesture section in Feedback Report with annotated frames				
Description: Ensure report contains postureScore, gestureScore, annotated frames, and flags (slouch/over-gesture).				
Precondition: Analysis job completed for a video with visible gestures.				
Dependencies: TC_09, TC_06				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open the completed Feedback Report. 2. Navigate to Body & Gesture section. 3. View annotated frames and metrics.	Previously analyzed video.	Posture & gesture scores visible; annotated frame snapshots accessible; flags shown where applicable;	Download landmarks CSV available.	Pass

Project Name: Presento	Test Designed By: Tonmoy			
Test Case ID: TC_11	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): High	Test Executed by: Tonmoy			
Module Name: Speech Analysis	Test Execution date: (TBD)			
Test Title: Validate speech transcription and filler-word detection				
Description: Ensure transcript appears with timestamps, WPM, filler word count and ability to filter filler words.				
Precondition: Audio present in submitted video.				
Dependencies: TC_09				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)

1. Open Feedback Report → Speech Section.	Sample video with known filler words (e.g., “um”, “like”).			
2. Play audio; view transcript and timestamps.		Transcript visible & synchronized; WPM calculated; filler words detected and counted accurately (within acceptable tolerance); filter works.	As expected	Pass
3. Check WPM metric and filler word counter; filter filler words list.				

Project Name: Presento	Test Designed By: Tonmoy			
Test Case ID: TC_12	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): Medium	Test Executed by: Tonmoy			
Module Name: Slide Visual Quality	Test Execution date: (TBD)			
Test Title: Validate slide visual quality scoring and multi-label predictions				
Description: Verify slide-level metrics (text-size, density, contrast, layout-consistency) and actionable advice for each label.				
Precondition: Slides uploaded with intentional quality issues.				
Dependencies: TC_06				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Slide Quality section for a report.	Slide deck with very small text, high density, low contrast.			
2. Review per-slide labels and overall slide score.		Multi-label predictions correctly flag issues; scores normalized 0–100.	suggestions provided for corrections	Fail
3. Click suggestions for each flagged issue.				
Project Name: Presento		Test Designed By: Mahfuza		
Test Case ID: TC_13		Test Designed Date: 09/15/2025		
Test Priority (Low, Medium, High): Medium		Test Executed by: Mahfuza		
Module Name: Slide Semantics		Test Execution date: (TBD)		
Test Title: Validate slide semantic analysis (readability & topic drift)				

Description: Ensure BERT-based analysis detects off-topic content, jargon, and provides readability scores/suggestions.				
Precondition: Slides contain off-topic or jargon-heavy text.				
Dependencies: TC_12				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Slide Semantics section in report. 2. View flagged text and readability meter. 3. View suggested text improvements and examples.	Slide text with jargon and sentences unrelated to topic.	Off-topic areas flagged; readability metric shown; suggestions appear with examples	As expected	Pass

Project Name: Presento	Test Designed By: Mahfuza			
Test Case ID: TC_14	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): High	Test Executed by: Mahfuza			
Module Name: Feedback Report & Export	Test Execution date: (TBD)			
Test Title: Verify full Feedback Report generation and PDF export				
Description: Ensure complete report (Body, Speech, Slides), annotated screenshots, and downloadable PDF are produced correctly.				
Precondition: All analyzers completed successfully.				
Dependencies: TC_10, TC_11, TC_12, TC_13				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Feedback Report. 2. Review all sections and overall score. 3. Click Download PDF.	Completed report instance.	Report loads <2s; all sections present with visuals; PDF contains same key visuals and text; PDF download completes.	As expected	Pass

Project Name: Presento	Test Designed By: Mahfuza
Test Case ID: TC_15	Test Designed Date: 09/15/2025
Test Priority (Low, Medium, High): High	Test Executed by: Mahfuza
Module Name: Download & Share	Test Execution date: (TBD)

Test Title: Verify secure share link behavior (TTL & ACL)				
Description: Ensure share links respect permissions and expire after TTL.				
Precondition: Report created and share link generated.				
Dependencies: TC_14				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Generate share link with a TTL = 1 hour and permission “instructor-only”.	Generated share link URL.	Allowed user can access until TTL expiry; non-permitted user denied; after TTL expiry link inactive. Audit logs show access attempts.	As expected	Pass
2. Access link as allowed user and as a non-permitted user.				
3. Wait until TTL expires and try to access.				

Project Name: Presento	Test Designed By: Mahfuza			
Test Case ID: TC_16	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): Medium	Test Executed by: Mahfuza			
Module Name: Progress Dashboard	Test Execution date: (TBD)			
Test Title: Validate KPIs and attempt comparison on Progress Dashboard				
Description: Ensure WPM, filler rate, posture, and slide scores trends show correctly and comparisons between attempts possible.				
Precondition: At least 3 attempts exist for the student.				
Dependencies: TC_14				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Open Progress Dashboard.	Student attempts A, B, C (with varied metrics).	Charts show trends; filters apply; attempts comparison displays numeric deltas and graphs.	As expected	Pass
2. Apply date range filter.				
3. Select two attempts to compare.				

Project Name: Presento	Test Designed By: Nurul
Test Case ID: TC_17	Test Designed Date: 09/15/2025
Test Priority (Low, Medium, High): Medium	Test Executed by: Nurul

Module Name: Profile		Test Execution date: (TBD)		
Test Title: View and edit profile information				
Description: Verify user can view and update name and institution; email is read-only.				
Precondition: User logged in.				
Dependencies: TC_03				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. Go to Profile page. 2. Edit name and institution; click Save. 3. Verify changes persisted and displayed. 4. Verify email field is read-only.	New name = "Test Student 2" Institution = "Test University".	Save success message; updated fields stored.	As expected	Pass

Project Name: Presento	Test Designed By: Nurul			
Test Case ID: TC_18	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): Medium	Test Executed by: Nurul			
Module Name: Change Password	Test Execution date: (TBD)			
Test Title: Verify change password invalidates old sessions/tokens				
Description: Ensure changing password logs out other sessions and requires re-authentication				
Precondition: User has active multiple sessions.				
Dependencies: TC_03, TC_05				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
1. From Profile, choose Change Password. 2. Enter current and new password; save. 3. Attempt to use previous session tokens (other browser).	Current password and new password inputs.	Old tokens invalidated; other sessions require login with new password; confirmation email sent.	As expected	Pass
Project Name: Presento	Test Designed By: Nurul			
Test Case ID: TC_19	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): Medium	Test Executed by: Nurul			

Module Name: Instructor Reports	Test Execution date: (TBD)			
Test Title: Verify instructor report list filter, pagination, and CSV export				
Description: Ensure instructor can filter by student/date/score, paginate, and export filtered results.				
Precondition: Instructor logged in and multiple student reports exist.				
Dependencies: TC_14				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
<ol style="list-style-type: none"> 1. Login as Instructor. 2. Open Student Reports list. 3. Apply filters by student and date. 4. Use pagination to navigate pages. 5. Click Export CSV. 	Filters: Student = student.test@example.com, Date range = last 30 days.	Table filtered correctly; pagination works; CSV contains filtered rows with correct data.	Table not filtered properly	Fail

Project Name: Presento	Test Designed By: Nurul			
Test Case ID: TC_20	Test Designed Date: 09/15/2025			
Test Priority (Low, Medium, High): High	Test Executed by: Nurul			
Module Name: Privacy & Consent / Data Deletion	Test Execution date: 09/15/2025			
Test Title: Verify consent is required and delete-my-data flow works				
Description: Ensure consent is mandatory before any analysis and that delete-my-data removes files & reports.				
Precondition: User logged in and has at least one PresentationAttempt and report.				
Dependencies: TC_06, TC_14				
Test Steps	Test Data	Expected Results	Actual Results	Status (Pass/Fail)
<ol style="list-style-type: none"> 1. Attempt to submit a video without checking consent checkbox. 2. Check consent and submit. 3. Initiate Delete my data flow from Profile. 4. Confirm deletion and verify reports/files are removed and app shows no data. 	Existing attempt ID and report ID.	Submission blocked until consent is given; after delete request processed, files and reports removed, consent records updated, confirmation email sent.	As expected and records updated.	Pass

7. SOFTWARE PRODUCT METRICS

Object-Oriented and Class Metrics

Class	#Methods	WMC (sum CC)	CBC	Cohesion (LCOM)	DIT	NOC
User	2	3	1 (Profile)	High	2	3
Profile	4	7	1 (User)	High	0	0
PresentationAttempt	2	15	2 (SlideDeck, AnalysisJob)	Medium	1	2
SlideDeck	0	0	1 (PresentationAttempt)	High	0	0
AnalysisJob	3	9	1 (JobQueue)	Medium	0	0
JobQueue	2	4	1 (AnalysisJob)	High	0	0
BodyGestureAnalyzer	1	6	1 (BodyGestureResult)	High	0	0
SpeechAnalyzer	3	15	1 (Transcript)	High	0	0
SlideVisualAnalyzer	2	10	1 (SlideDeck/Image)	High	0	0
SlideSemanticAnalyzer	3	14	1 (SlideText/Topic)	High	0	0
Transcript	0	0	1 (SpeechAnalyzer)	High	0	0
FeedbackReport	3	11	4 (ReportSection, AnnotatedImage, ShareLink, Transcript)	Medium	0	1
ReportSection	0	0	1 (FeedbackReport)	High	0	0
AnnotatedImage	0	0	1 (FeedbackReport)	High	0	0
ShareLink	0	0	1 (FeedbackReport)	High	0	0
Admin	2	3	1 (Profile)	High	0	0
InstructorNote	2	5	1 (FeedbackReport)	Medium	0	0
ProgressService	2	10	2 (PresentationAttempt, KPISet/Comparison)	Medium	0	0
SupportTicket	1	2	1 (User)	High	3	0
ConsentRecord	0	0	1 (PresentationAttempt)	High	3	0
AuthenticationService	4	10	1 (User/Profile)	High	0	0
StorageService	2	6	1 (PresentationAttempt)	High	0	0
ReportDirectory	2	7	1 (FeedbackReport)	Medium	0	0
DataDeletionRequest	1	3	1 (User/ConsentRecord)	High	3	0

8. CONCLUSION AND FUTURE WORK

This research and development effort set out to address a pressing gap in education: the lack of scalable, consistent, and actionable feedback on students' presentation skills. Traditional methods of evaluation dependent on instructor availability, subjective judgment, and limited time often leave students unaware of persistent flaws in body language, vocal delivery, or slide design. To mitigate these challenges, we developed Presento, an AI-powered multimodal platform that integrates computer vision, speech analysis, and slide evaluation to provide students and educators with objective, evidence-based, and personalized feedback. The system not only helps learners identify and correct weaknesses but also reduces the workload of educators while supporting data-driven progress tracking. During development, challenges arose in ensuring robust accuracy across different modalities, maintaining low-latency processing for practical classroom use, and safeguarding user privacy through secure data handling. These were addressed through careful model selection, modular system design, and role-based access controls. As a result, the platform demonstrates both technical feasibility and pedagogical value, proving successful in creating an end-to-end solution that bridges the gap between human coaching and automated analysis. The contributions of this work are twofold: first, offering a novel multimodal integration of AI for educational feedback, and second, establishing a scalable system design that aligns with real classroom environments. Presento has the potential to transform not only academic training but also professional communication, public speaking practice, and corporate training programs by offering reliable, unbiased evaluation at scale. Looking forward, several opportunities for enhancement remain. Future work could expand the system with real-time feedback during live presentations, enabling immediate corrective action. Scalability can be further strengthened by supporting larger cohorts, integrating cloud-native infrastructure, and optimizing models for mobile devices. More advanced analytics, such as emotion detection, engagement measurement, or adaptive coaching tailored to user progress, could enrich the learning experience. Additionally, expanding multilingual support will broaden the system's accessibility to non-English speakers.

In conclusion, Presento lays a strong foundation for AI-driven educational assistance by solving an immediate problem faced by both students and educators while also opening avenues for future innovation. With thoughtful scaling and continuous refinement, it has the potential to become a global standard in automated presentation skill assessment and feedback, ultimately empowering learners with the confidence and competence required to excel in academic and professional domains.